# A Homeland Defense Mission

by Major Kevin Stringer, US Army Reserve

With the rise of transnational security threats such as terrorism, weapons of mass destruction (WMD), international crime, drug trafficking and illegal immigration, the comprehensive defense of the Continental United States (CONUS) takes on increasing importance. The constant possibility of environmental disasters, both man-made and natural, also emphasizes domestic security issues. The term "national defense" resumes its true meaning and focuses on protecting core US values—those political, economic, social and cultural interests and activities that represent our nation.

The US homeland's distance from potential adversaries has long protected its core interests and activities, which form the center of gravity for US security. This luxury no longer exists because of global security threats since the Cold War's end that can target and reach the US mainland. This potential danger requires the military to prepare to defend the US homeland from a multitude of unconventional threats.

Given this security situation, homeland defense (HLD) is high-priority for the United States. Because the United States has a dominant position in the Western Hemisphere and no conventional military threat on its borders, the HLD mission generally excludes the combat role and instead encompasses several nontraditional activities that fall under the aegis of military operations other than war (MOOTW). Because the Department of the Defense (DOD) and individual services have not officially defined the missions with this function, MOOTW activities mentioned in this article are a small indication of missions required to support HLD. The final product may be much more comprehensive as this concept evolves over the next few years but will generally exclude conventional warfighting activities. Given these parameters and considering the land power nature of this HLD mission, the main responsibility for its execution will fall on the US Army, in particular the US Army National Guard (ARNG).

Although DOD has not pinpointed HLD responsibility, the assumption that the ARNG will play a lead role is based on its presence in all states and territories, its historical involvement in MOOTW missions within CONUS and its constitutional obligations to maintain the security and well being of each state. Currently, domestic support for MOOTW missions constitutes the majority of ARNG requirements.[1]

Although the US Army Reserve (USAR) may play a role in HLD, its involvement will be diminished by the following:

- Its combat support (CS) or combat service support (CSS) functions for the active force.
- Its increasing overseas deployment cycle to Bosnia- and Kosovo-like support missions.
- Its overall integration into Active Component (AC) missions.

Unfortunately, this environment does not bode well for the ARNG's continued ability to maintain its training readiness for the combat role in today's force structure. Rather, there is a distinct danger that a focus on HLD would degrade the ARNG's ability to perform in combat. This possible loss of warfighting readiness stems from three things:

- The nontraditional nature of the HLD mission and the ARNG's unique suitability for this task.
- Spending limited and valuable training time on nontraditional missions rather than combat training missions stressing unit-level combined arms proficiency.
- Building habitual planning and staff relationships with civilian and law-enforcement agencies (LEAs) rather than AC combat formations.

Solving this predicament means restructuring Army Reserve Components (RC) to place the bulk of reserve combat formations in the USAR and reserve CS and CSS units in the ARNG.[2] This reorganization would align ARNG unit functionalities with their most common and likely mission requirements while serving under either state or federal control for the HLD role.

## Classifying MOOTW Activities

In analyzing the HLD mission, US Army Field Manual (FM) 100-5, *Operations,* provides a framework for classifying MOOTW activities and a guide for identifying those that pertain to HLD.[3] Of the 13 activities listed for MOOTW, four generally apply to homeland defense. These four are not necessarily distinct and may overlap in a domestic context. Furthermore, the ARNG has played a strong and valuable role in all four areas under both state and federal control.

Support to domestic civil authorities during domestic emergencies helps suppress violence or insurrection. These activities also include border-control operations directed against illegal immigration. Under the provisions of *The Posse Comitatus Act*, neither the AC nor the USAR may replace duly appointed LEAs.[4] Although Congress has slightly modified the law for these two components, the *Act* is less restrictive for the nonfederalized ARNG under Title 32 of the *US Code* (*USC*).[5] The ARNG is a natural candidate for

such missions and has historically performed them either in a state or federal status. In 1996, for example, 46 states and territories called on the ARNG for a record 460 state emergency call-ups to support domestic civil authorities.[6] A more specific example of this activity and ARNG participation occurred during the 1992 Los Angeles Riots when the California National Guard (CNG) was called to restore civil order following the Rodney King trial. Three heavy CNG brigades were alerted for this operation.[7]

Humanitarian assistance and disaster relief involves supporting domestic agencies to promote human welfare, reduce pain and suffering and prevent the loss of life or destruction of property in the aftermath of natural or man-made disasters. The Army provides logistic, medical and manpower support for these operations. Again, the ARNG is ideally suited for these since it usually has indigenous units located in the affected region. Examples of ARNG participation include domestic emergency support in the aftermath of various California earthquakes in the 1990s, Hurricanes Andrew and Iniki in 1992 and the Midwest floods of 1993.

Support to counterdrug operations primarily concentrates on supporting LEAs and the counterdrug efforts of other federal departments to interdict the flow of illegal drugs. Support for domestic counterdrug operations includes military planning and training assistance to domestic LEAs, equipment loans and transfers and other assistance as requested or authorized. Given its Title 32, *USC*, status and its resources, the ARNG often participates in such operations.[8] This activity is mandated by federal law for the ARNG and authorized by the Secretary of Defense.[9]

Arms control activity goes beyond the traditional Cold War task of promoting strategic military stability by monitoring the proliferation of weapons and technology and verifying arms control agreements. For the HLD mission, this area now covers detecting and preventing WMD usage on US soil, preparing US citizens for chemical and biological attacks and responding militarily to such assaults.

## Training on Tasks

All these activities require training on tasks outside the collective combined arms focus for successful combat. Also, these activities require stress-intensive cooperation and integration with federal and state LEAs, other federal organizations such as the Federal Emergency Management Agency and some nongovernment organizations such as the American Red Cross.

Given that the ARNG is already heavily involved in HLD activities, it has developed strong and habitual links with civilian agencies rather than the Active Component. These linkages come as a detriment to ARNG combat formations executing these tasks. Recent examples of ARNG involvement in domestic MOOTW activities for homeland defense confirm a shift toward nontraditional missions and more interagency cooperation with nonmilitary federal and state organizations.

## The CNG

On the West Coast, the CNG participates in a host of counterdrug operations on the US-Mexico border. These programs range from border reconnaissance and observation to engineer support. As in other states, the CNG's counterdrug program tailors support activities to meet LEA requests. National counterdrug programs fund the mission.

Work performed by the ARNG is designed to free up more law-enforcement officers for drug interdiction duty or investigations. In performing these tasks, the CNG is involved in two HLD activities—support to domestic civil authorities and support to counterdrug operations. In executing these missions, the CNG works extensively with the US Border Patrol, the Drug Enforcement Agency and the Immigration and Naturalization Service. These interagency operations require extensive adaptation, liaison and integration with civilian LEAs. Although military skills are used, methods, training and doctrine differ vastly from those required for conventional warfighting.

Units and individuals are not focusing on collective combat training during the precious training days used for these missions. Naturally, an AC unit would suffer degraded collective combat skills when performing such missions, but it would be able to recover this lost proficiency because its full-time status allows more time for refresher training. Given that most ARNG units only have 39 training days per year, any ARNG combat formation participating in such nontraditional operations faces a daunting training deficit in combined arms proficiency.

The cumulative effect of numerous, consecutive HLD missions would be almost impossible to overcome, given the ARNG's part-time status. Further, allocating additional training days to close gaps would strain employer support for drilling employees.

## The PRNG

The Puerto Rico National Guard (PRNG) has concentrated on the HLD mission by fighting drug-related crime on the island and providing humanitarian relief to the communities affected by the drug trade. The PRNG concentrates on support to domestic civil authorities, counterdrug operations and humanitarian assistance. During Operation *Centurion* in 1996, PRNG units and the police moved into 76 housing projects to arrest dealers and criminals and restore community order. Puerto Rico Governor Pedro Rossello created the program to reinforce limited Puerto Rico LEA assets and drive out drug traffickers from housing areas. The secondary objective was to restore normalcy to communities through a coordinated security and social effort. Soldiers from aviation and military police units supported the police in the initial cordon, search, seizure and arrest phase. Once the target area was cleared of identifiable criminal elements, infantry, artillery, engineer and maintenance personnel helped

community agencies rebuild housing complexes, distribute antidrug literature, rehabilitate facilities and dispose of garbage.

The program was a resounding success, and the PRNG's skills and resources were paramount. Unfortunately, in terms of active force integration, this wealth of operational experience was misdirected. The PRNG applied and exercised MOOTW doctrine, not conventional war-fighting practices. They used valuable training days that could have been used for collective combat training. They also built close cooperation, reinforced habitual relationships and integrated with police and various social agencies—not with AC combat forces.

The Californian and Puerto Rican examples illustrate the debilitating readiness effects of ARNG combat units' participation in HLD missions. They reflect a trend the US Domestic Preparedness Program reinforces—emergency providers from US cities receive training on how to respond to an attack involving WMD elements. The ARNG contributes substantial training and support to this DOD-directed program. Participation is the result of the 1996 *Congressional Defense Against Weapons of Mass Destruction Act*, which made DOD the lead agency for WMD-consequence management.[10]

Unfortunately, this DOD policy creates the possibility of having ARNG combat units focus on a domestic mission, which detracts from warfighting readiness. Further, this program requires the ARNG to interact with agencies related to civil defense rather than the AC. Participating ARNG combat units do not emphasize battalion and brigade collective combat training—the basis for warfighting success. Rather, they focus on MOOTW training templates that differ doctrinally from conventional warfighting templates.

Nevertheless, the ARNG is better suited for HLD operations as state-directed organizations with fewer *Posse Comitatus* restrictions.[11] Further, ARNG members perform these missions in their home states, where they identify and bond with the civilian populace. ARNG dominance in these operations, however, creates distance from the strategic combat reserve mission. This alienation from conventional warfare creates focus on a nontraditional HLD doctrine rather than on the accepted warfighting model.

Given the already limited number of annual collective training days for an ARNG combat unit, without substantial training, ARNG combat units' ability to fight alongside their AC brethren is threatened. The issue is not whether ARNG units can perform in the combat role. Rather, if ARNG combat units participate in more and more nontraditional domestic missions within the HLD framework, their conventional combat training readiness will suffer, and the wrong habitual staff and planning relationships will form.

## A Possible Fix

The United States must be prepared to defend its homeland from a variety of nontraditional threats. The ARNG provides an excellent and natural instrument for confronting these threats. However, this approach dangerously diverts the ARNG from its combat mission. One way of resolving this issue would be to place all ARNG combat formations into the USAR. This practical change would logically align the nation's primary strategic combat reserves with their AC partners, eliminate dual control over these combat formations and allow the active Army to direct training and combat readiness without subordination to state control.

Conversely, all CS and CSS units could then be integrated into the ARNG and focus on the HLD role, which more closely mirrors the types of crises and emergencies faced by individual state governors. In effect, the ARNG would return to its territorial or constabulary nature, which in fact more closely approximates the legacy of the ARNG's militia history and tradition.

Although this concept is politically contentious, it is not new. In 1948, a DOD-designated board headed by Assistant Secretary of the Army Gordon Gray proposed an even more radical change to improve the US national security: merge the entire ARNG into the federal reserve to overcome the problems of dual control and influence on readiness.[12] Given the ARNG's high value for homeland defense, I do not advocate such an extreme measure, but commonsense defense based on training issues argues for placing reserve combat forces in the USAR. It makes sense for the states because, "prestige considerations aside, state governors have a greater need for transportation, military police, medical, engineer and helicopter units than they do tank and infantry battalions."[13]

Support units are exactly what the HLD mission requires. Further, these are the types of units that states can readily fill since "the transfer of skills from the civilian community to the military is very high for support functions, but virtually nonexistent for maneuver combat units."[14] This fact creates synergies in terms of ARNG recruitment and force composition, since many of these civilian-acquired support skills directly contribute to the HLD mission. The result is win-win as the states gain the capabilities they need, and "without the peacetime phenomenon of dual chains of command, the active Army can influence the combat training and readiness in the USAR to a much greater degree than in the ARNG."[15]

Opponents of this initiative will cite the recent activation of the AC/RC division, in which three ARNG enhanced-readiness brigades fall under an active-duty division headquarters, as an example of improving the combat readiness of ARNG combat formations. Although this step is in the right direction, it does not go far enough, since those units still remain under the state governor's statutory control until federalized. If they are used for HLD missions, valuable annual training days are lost with the resultant impact on unit combat readiness. The politically difficult decision to place all combat as-

sets in the USAR could alleviate this issue and open the way for a more efficient citizen-soldier force. ***MR***

### NOTES

1. Written comment to first draft of this article from an official of the National Guard Bureau, 1999.
2. LTC Richard D. Hooker Jr., "The Role of the Army in the Common Defense: A 21st Century Perspective," AUSA Institute of Land Warfare, Landpower Essay Series, *99-4 (April 1999), 5.*
3. US Army Field Manual (FM) 100-5, *Operations* (Washington, DC: US Government Printing Office, date unknown).
4. Title 18, *US Code, Section 1385, The Posse Comitatus Act.*
5. Title 32, *US Code, Section 102, National Guard*, 05 January 1999.
6. MG William A. Navas Jr., "The Army National Guard: Flexible, Accessible Force," *ARMY 1996-1997 Green Book* (October 1996), 92.
7. Bruce R. Pirnie and Corazon M. Francisco, *Assessing Requirements for Peacekeeping, Humanitarian Assistance, and Disaster Relief* (Santa Monica, CA: RAND, 1998), 9 and 10.
8. Title 32.
9. Public Law 101-189, *National Defense Authorization Act for Fiscal Year 1990 and Fiscal Year 1991*, Title XXII, 29 November 1989.
10. *Congressional Defense Against Weapons of Mass Destruction Act*, 1996.
11. Title 10, *US Code, Armed Forces*, Subtitle A, *General Military Law*, Chapter 13, Militia, 05 January 1999.
12. *Uniform Code of Military Justice*, 7 February 1949. Code enacted into law 5 May 1950 (64 Statute 107).
13. Hooker, 5.
14. Ibid.
15. Ibid.

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# Air Power: Closing the Last Sanctuary

by Lieutenant Colonel David R. Mets, US Air force, Retired

*My personal experience—over 24 hours of flight time on days 1 to 3 of the ground war—was that I never saw a fixed-wing aircraft. I know there were some CAS* [close air support] *sorties flown, but I didn't see them. If they're not there, they're not providing CAS*[1]

—Anonymous

In the article "What If It Works? Air Armament Technology for Deep Attack," which appeared in the December 1986 issue of *Military Review*, I expressed concern about the high-tech/low-tech debate central to then-current military thought.[2] The article questions whether the US military would be ready if available technology actually worked *better* than expected. I cite US historian Ernest R. May's idea that the US military is influenced by contemporary experiences to the neglect of history.[3] The article offers as examples the mining of lines at Petersburg, Virginia, in 1864 and the gas attacks at Ypres, Belgium, in 1915, where technology worked well, surprising commanders but leaving them unprepared to exploit their successes.[4]

I was way off the mark with the conceptual framework that underlay the article—a war on the northern European plain against an enemy with an offensive doctrine and far greater numbers than we possessed. However, some points in the article might be worth revisiting.

## Technology as Used in Iraq

Did available technology work in Operation *Desert Storm* in either the technical or tactical sense? Almost all articles concerning the war against Iraq argue that the conflict was unique and, therefore, we cannot base lessons on it. Such articles then draw inferences that appear to be lessons. Granting that every war is unique, can we find anything from the experience that might help the professional soldier think about the future? Would the technology work next time? How can it improve to better fit the future? Could US soldiers' green spectacles skew their vision of the future?

"To use air power in penny packets is to disregard the importance of a menacing and even mysterious military reputation—'the reputation of power is power,'" [English philosopher Thomas] Hobbes wrote, and that applies to military power as well as other kinds. The sprinkling of air strikes over an enemy will harden him without hurting him and deprive the United States of an intangible strategic asset: [S]tudents of air power will serve the country well by putting the Gulf War in a larger context, one in which the gloomy wisdom of [Union General William Tecumseh] Sherman tempers the brisk enthusiasm of those who see air power as a shining sword, effortlessly wielded, that can create and preserve a just and peaceful world order."[5]

## A Dilemma of Sorts

Operation *Desert Storm* unleashed a tempest of words about packaging and employing air power—words of praise and critique, bravado and defensiveness. Did these words arise from the standard bureaucratic dread of diminished turf or budget? Did they arise from military personalities who believed their share of glory was insufficient? Did they arise from the rediscovery that antiestablishment arguments—especially nasty ones—smooth the road to fame in journalism or tenure in academia? Or could some have arisen from solid inductive reasoning based on valid empirical combat data and a patriotic concern for national security and humanity?[6]

This is a problem for Solomon. The Cold War is over, but no one knows what will replace the stable bipolarity we have known. Many authors argue that the day of conventional, interstate war is gone. The war to end all wars has finally been won. But, is that so? Official national strategy acknowledges that a war against ex-Warsaw Pact powers on the Northern European plain is improbable but posits that the future holds possible regional, conventional wars similar to *Desert Storm*. Yet, some writers argue that regional adversaries will be much too clever to play to our strong suit. Rather, they will choose other forms of conflict, such as guerrilla war.[7]

Has the common assumption that the United States will not tolerate casualties proved valid? Does that mean we cannot engage any adversaries smarter or stronger than Saddam Hussein? Was Iraq such a house of cards that any strategy or any technology could have brought it down? Or does the Gulf War offer evidence that technology can sometimes help achieve national political objectives through organized violence and low casualties?[8]

## The Possible Solution

*Desert Storm* literature generally considers the Gulf War unique—and shorter than we should expect next time. Declared objectives were met, Allied casualties were blessedly low, and the land campaign was short and inexpensive in lives. No one questions that the environment was especially favorable to air power. No one doubts that air superiority was one-sided. Almost no Allied aircraft were lost, while the Iraqi Air Force lost over 30 planes to air-to-air missiles.[9] Nor is there much argument about some parts of the air-to-ground war. Precision-guided munitions (PGMs) were technically efficient, but there is some question as to whether they were as effective as enthusiasts assert. PGMs were far more accurate than unguided munitions even where they did not measure up to figures coming from the test range. Feedback has been a tough problem for military commanders since antiquity, and even modern bomb-damage assessments offer a limited view of an attack's effectiveness.[10]

Maverick missiles were used mainly in Kuwait and come in infrared, television (TV)- and laser-guided versions. But they are also expensive, and their warheads are much smaller than those in the bombs. Even high-tech air enthusiasts agree that to some degree bad weather diminished PGM effectiveness. Although the Iraqi Scuds were not much of a military threat, they were a serious political threat and finding them from the air was a tough problem.[11] In the technical sense, there is some consensus that the aerial weaponry worked well in the Gulf War.

At a higher level of analysis, agreement disappears. Many historians argue that *Desert Storm* was unique—and not only for our time. They believe it will probably be among the last conventional wars between traditional states.[12] As historians have not yet agreed on what started the American Civil War or World War I, we remain uncertain as to what ended the Gulf War—despite the firm opinions many writers express.[13] One could marshal enough quotes to fill a small book about the decisiveness of deep attack. Many other pundits claim the ground war, with its battlefield air support and its implied threat, made the difference or that the Iraqi house of cards was so fragile that anything would have worked.[14] Joint force air component commander (JFACC) General Charles A. Horner, writes that the JFACC system and its associated air tasking order worked—that the long struggle for centralized command of tactical air power at the theater level was consummated. Others doubt it.[15]

Since the days of Dunkirk and Kasserine, ground forces have consistently complained that air forces have not provided adequate support. Usually, opposing ground commanders, such as German Field Marshall Eric Rommel, saw things differently.[16] The air partisan would likely suppose that the Gulf War would not have been marred by such complaints. But clearly, those complaints are not dead.[17] On the air side of things, at least implied, is that the ground war against Iraq was a cake walk thanks to air power—notwithstanding the uncertainty over its decisive role.[18] The high-tech airpower enthusiast would argue that modern radar and infrared targeting systems, such as the airborne warning and control system and the joint surveillance target attack radar system, denied the opposition the sanctuary of darkness, which had been a boon in North Korea and North Vietnam. The skeptic would argue that any competent opponent would pay any price to take out such systems. Also, even in the Gulf, where the climate is more benign than in either Korea or Vietnam, weather conditions nonetheless inhibited PGM effectiveness.[19]

Perhaps the most important disagreement on what we can learn from *Desert Storm* has to do with the cost-effectiveness of high-tech approaches. Air-power partisans favoring PGMs and other sophisticated technologies generally assert that huge leverage and savings can be gleaned from stealth and the fewer munitions required for a given level of destruction. Partisans often assert that their low-tech opposites are penny-wise and pound-foolish, put too low a price on human life and mistakenly see precision munitions' high unit-cost as prohibitive for combat persistence, mass attack and peacetime training. Debate continues over whether dependence on high technology, especially in air power, will reduce the flexibility needed to cope with the fog of war.[20]

## Reducing Uncertainties

The fog of war can never be completely eliminated. However, new air-armament technology might be able to reduce it and enhance the odds that future commanders' judgments can be correct—or less wrong than those of adversaries. The US Air Force has the lead in the Joint Direct Attack Munitions (JDAM) Program. The US Navy is leading the Joint Standoff Weapons (JSOW) Program. To some extent, both services will consolidate several different technology efforts that antedated the Gulf War and will only partially respond to some limitations suggested by that conflict.[21]

German Field Marshall Karl Rudolf Gerd von Rundstedt lamented that after the Normandy landings his troops had no sanctuary but the night. The chosen starting time for the Battle of the Bulge showed that the Germans knew that weather could protect them from Allied air power.[22] Darkness also sheltered the North Koreans and Communist Chinese during the Korean War and the North Vietnamese during the Vietnam War. By the onset of *Desert Storm*, much had been done to remove the night blinders, but weather could still shelter an enemy to some degree.

**JDAM.** Currently, the JDAM effort seems to significantly reduce night's sanctuary and contribute to the savings gleaned through the use of new technology. Managed by the Air Force Materiel Command's Air Armament Center, the program will employ fairly mature guidance technology that promises radically improved accuracy of free-fall bombs delivered from medium altitude even from above cloud decks. The warheads for the first-phase weapon are the standard Mk-84 2,000-pound general-purpose bomb already in the

inventory. JDAM cannot duplicate the precision of laser-, TV- or infrared-terminal guidance systems.[23] The systems require at least some visibility, sometimes entail an uncomfortably close approach to the target or are fairly expensive.

In part, the JDAM program has grown out of the earlier inertial-aided munitions effort at Eglin Air Force Base, Florida. JDAM will use the standard bombs with strap-on kits consisting of an inertial measurement unit and a global positioning system (GPS) receiver for location updates. These units will lack the last increment of precision found in terminally guided systems, and will depend on good target intelligence, which will sometimes be unavailable and usually difficult and expensive to obtain. Nonetheless, if the program is successful, it will seriously erode the sanctuary bad weather now provides.[24]

Terrain has always provided protection for the adversary. Potent new air-to-surface systems—soon to be enhanced with several new weapons—reduce the enemy's ability to find safety in hills and tunnels. However, rough terrain continues to hinder nonguerrilla surface forces; it slows them down, channelizes their movements and makes them more vulnerable to accurate air strikes from medium altitude.

Jungle terrain makes targets even harder to acquire from medium altitudes than does mountainous terrain. Overall, it remains a problem that new information technologies have not yet solved.[25] Still, the submunitions developed since Vietnam certainly would be much more effective today even in marginal weather conditions. In any event, from the air-power view, even the best terrain can be misused by surface defenders to forego what little protection is possible, as in *Desert Storm*.[26]

The first phase of JDAM should deliver early an important and inexpensive improvement. The US Air Force has already ordered the weapon into low-rate initial production. *National Defense* reports that in 35 test drops JDAM hit within 8.2 and 12.2 meters of the aim point 97 percent of the time.[27] Subsequent versions were expected to yield the same precision as the current clear-air PGMs, reduce costs and enhance both flexibility and readiness. Initially, JDAM kits were to have cost about $40,000, but by 1999 the cost was only $18,000.

JDAM enables the adverse-weather use of standard inventory bombs. Later phases are expected to use a new, 500-pound bomb body to replace current Mk-82s. The new bomb can be shipped and stored in "all-up" condition—fully assembled, containing fuze, booster, filler, guidance and dual-purpose tail fin. This configuration will greatly enhance both economy and readiness, especially on aircraft carriers, by reducing the need for substantial ordnance assembly and maintenance personnel.[28]

The inertial part of the guidance kit of the first-phase JDAM will yield a substantial improvement in accuracy even when it cannot receive GPS signals. Originally, the later phases were to have added an autonomous seeker that would have found the exact aim point once the inertial/GPS guidance had put the weapon into the general vicinity of the target. Not only would accuracy have been brought up to that of current terminal-guidance systems, it would have reduced intelligence requirements. The absolute coordinates of a tank would not be needed to launch a weapon at it. Several possibilities existed. Millimeter-wave, synthetic-aperture radar and laser-radar research efforts had long been underway, all having potential for adverse-weather operation.

True autonomous guidance also depends on reliable algorithms stored in small computers on the weapon itself. Since they must measure images coming from unpredictable angles at unpredictable distances against stored images, the computational requirements are huge. The process is complex and expensive, but reducing the number of wasted bombs and sorties is economical nonetheless. Testing revealed a 39-foot circular error probable (CEP), which is certainly sufficient for the majority of targets when using a 2,000-pound warhead. To keep expenses down, program directives dictate inertial/GPS kits to have a high degree of commonality with the Navy's JSOW.[29] Yet, as of today, no precision seeker is funded for the JDAM because of the considerable expense.

**JSOW.** The joint standoff weapon, which grew out of the Navy's former Advanced Interdiction Weapon System Program, envisions a 1,000-pound weapon for the F/A-18. The program will be implemented in phases from the relatively simple to the complex. Initially, the weapon will have guidance similar to that for JDAMs, but it will offer substantially greater standoff. One version to be procured in relatively small numbers will have an infrared seeker for precision attacks.[30]

The JSOW's usual payload will be submunitions, the combat-proven combined-effects munition (CEM), with shaped charges for penetration, fragments for antipersonnel and zirconium for incendiary effects. Precision guidance is not required for such scatter weapons or for the Air Force's part of the program, which will integrate sensor-fuzed weapon submunitions with the JSOW airframe for antiarmor missions.

The Air Force's glide bomb, the GBU-15, has some standoff achieved with cruciform wings, but the JSOW has folding wings resembling those on conventional aircraft. This structure allows greater standoff, although initial versions of JSOW do not have propulsion. Propulsion is envisioned for later phases of the program, and integrated seekers will add even greater accuracy. The new weapon will replace the ROCKEYE, whose submunitions are less effective than CEM and which has to be launched closer to the target.

The JSOW has guidance arrangements that overcome some weather limitations and permit greater standoff and serves to replace some standoff missiles and bombs already in the inventory, at a lower cost. Other ongoing programs will help remove the weather sanctuary. For example, the low-altitude navigation and targeting infrared night system, still quite new in the operational Air

Force during *Desert Storm*, permits low-level flight under clouds at night.[31]

**The Small Smart Bomb (SSB).** The F-22 will achieve its stealthy quality in part from the internal carriage of its weapons, as does the B-2 and the Joint Strike Fighter. Both JDAMS and JSOW have many virtues, but stealth is not one of them. Both are too bulky to be considered for internal carriage. The SSB is currently under development to produce a weapon as destructive as standard 2,000-pound bombs, yet so small that three of them can be crammed into the same space as the Mk-84. This will come in part by improving the explosive filler and in part by making them much more accurate than earlier weapons. A given weapon's destructiveness varies directly with the explosive filler's weight, but inversely with the cube of the "miss distance." Thus, there might be more ground to gain in accuracy improvements.

If the program is successful, it will be possible to cram six SSBs into the bay of an F-117 where only two 2,000-pound bombs would fit. With just two Mk-84s, the F-117 was already the Gulf War's most deadly platform against point targets in heavily defended areas. Therefore, part of the gain would come from accuracy improvements and part from having more shots per sortie. If stealth holds up, aircrews will benefit from yet another accuracy factor by being able to deliver the weapon using greater deliberation than when being actively opposed by the defenses in a nonstealth aircraft. Also, it might be possible to use the SSB as a *Skeet*—sensor-fuzed weapons—submunitions in dispensers from nonstealth aircraft outside most defenses.[32]

At first the SSB will come with a combination GPS/INS guidance system, in a hardened, very long casing with the standard explosive filler. Later phases will include a more potent filler and a laser seeker.[33]

**Wind-Corrected Munitions Dispenser (WCMD).** One of JDAM's and JSOW's desirable traits is their low unit cost. Another is their accuracy from higher altitudes and greater distances. Similarly, adding kits to standard submunitions dispensers provides low-cost standoff for weapons not needing the last increment of precision—the goal of the WCMD program.

The WCMD has a greater measure of adverse-weather capability than current standard dispensers. Obscurants can defeat most PGMs now in the inventory. The launch-and-leave WCMD depends on neither a jammable data link nor a seeker subject to jamming or blinding. The required CEP of 100 feet should yield a potent capability with scatter submunitions when environmental conditions inhibit the use of other armaments.[34]

**Joint Air-to-Surface Standoff Missile (JASSM).** If the JSOW costs more than the WCMD because of range, it might still be cheap in terms of lost lives and airplanes. Still beyond JSOW, there were other programs built on the technologies of earlier efforts to achieve the same effects against other air defense systems.[35]

The JASSM is to have a range longer than any other fighter-launched weapon, be capable of autonomous guidance and have a hard-target penetrating capability. The total procurement is to consist of about 2,400 missiles. The current aim is to deploy the weapon during 2002.[36]

What are the implications for future security? For opposing surface forces, the sanctuary of distance began to diminish during World War I with the introduction of aircraft on the battlefield. The sanctuary of darkness began to be reduced when infrared sensors were introduced during the Vietnam War. By Operation *Desert Storm*, the sanctuary of hardness—the protection provided by layers of concrete—began to be diminished by the I-2000 penetrating bomb. It now seems certain we are on the verge of eliminating the last refuge—the sanctuary of weather.

## Speculations for the Future

The US Army Air Force's darkest hour occurred during the weeks following the second Schweinfurt Raid of October 1943. Strategic bombers always got through to downtown Germany, but too few of them made the round trip—far too few in view of damage inflicted. Through those agonizing months, the crisis' resolution seemed just around the corner. While initial 8th Air Force Spitfires threatened *Luftwaffe* defenders, the Germans merely backed off until the US fighters returned to base. The Spitfires were replaced with P-47s, which could reach further into occupied Europe, but the bombers' agony went on. Again, German fighters merely waited until the P-47s turned for home then waded into the hapless bomber formations. Innovations continued to shrink the sanctuary, but the Luftwaffe continued to come up with bigger cannons and rockets. When the agile P-51 finally appeared, the sanctuary disappeared. The P-51s could drop their external tanks and pop up behind the German fighters, where agility and rate-of-fire counted for more than weight of fire and gun range. The bomber crews' pain rapidly declined.[37]

The penalty of premature commitment to a technological revolution was made clear over Schweinfurt. While there might never be another air campaign like it, an analogy can still be drawn. Since the days of airpower proponent Brigadier General William "Billy" Mitchell, airmen have been promising ground soldiers more than could be delivered. Who can blame soldiers for skepticism or for doubting their brothers in the air can make the march to some latter-day Berlin a cakewalk? The history of military technology is much more characterized by evolution than revolution. Perhaps there has never been a real revolution, except in the case of nuclear weapons. But, is it certain that just because such a revolution seldom happens, that one will never occur? The penalties for tardy recognition of a technological revolution could be worse than for premature commitment.

In *Thoughts for Joint Commanders*, Lieutenant General John H. Cushman passionately pleads for jointness.[38] However, some might question his use of the term. He seems to see a clear role for land-oriented campaigns with soldiers or perhaps Marines as joint command-

ers and of sea-oriented campaigns with admirals as joint commanders. Before NATO's involvement in Kosovo, an air-only campaign seemed remote.

Cushman recommends—as do I—that all fixed-wing air operations inside the fire support coordination line (FSCL) be coordinated with the ground commander. Yet, he seems to think that JFACC oversight of operations of Army helicopters or missiles *forward* of the FSCL is "inconceivable" for division and corps commanders.[39] "[T]he airman must adopt the land commander's way of looking at the dynamics of the battle, and the land commander must understand how the airman must operate in his own medium, the air.... Despite ad hoc solutions in-theater (*Desert Storm*) [such as the theater commander's naming his deputy to arbitrate between land commanders and the theater JFACC], targeting procedures and their products for what land commanders called 'shaping the battlefield' were never satisfactory from the land commanders' viewpoints. The Navy in *Desert Storm* had similar complaints."[40]

If some troops saw no friendly fixed-wing close air support during the entire four-day ground war, neither did any see a MiG or a Frogfoot. If the conduct of the air war was unsatisfactory in land commanders' eyes, just what would be satisfactory? It suggests to the Air Force that the Kasserine-era Army image of the air arm and its capabilities has not changed much; it is always a supporting arm, is insufficiently responsive and that only ground commanders can understand battle dynamics to control their own and joint forces.

Yet, every American prefers the outcome in *Desert Storm* to that in Vietnam. Many assert that *Desert Storm* was unique; that it will not work nearly so well next time. Others grant the uniqueness, but argue that improved and properly employed technology for the deep attack might work just as well next time. No one has considered another logical possibility; what if it works even *better* next time?

If the last sanctuary is about to slam shut, and if an almost-unique revolution will enable airmen to better fulfill their promises next time, does not every soldier (and other American) owe it to the memory of the sufferers of the Battle of Ia Drang to at least consider the possibility?[41] Can the air component ever be the supported force? ***MR***

## NOTES

1. Anonymous Operation *Desert Storm* helicopter commander.

2. LTC David R. Mets, "What If It Works? Air Armament Technology for Deep Attack," *Military Review* (December 1986), 12.

3. Ernest R. May, *Lessons of History: The Use and Misuse of the Past in American Foreign Policy* (New York: Oxford University Press, 1973).

4. Mets.

5. Thomas A. Keaney and Eliot A. Cohen, *Revolution in Warfare? Air Power in the Persian Gulf* (Annapolis, MD: Naval Institute Press, 1995).

6. For a recent discussion of the various schools of thought relating to the Gulf War and an attempt to build the synthesis, see Stephen Biddle, "Victory Misunderstood: What the Gulf War Tells Us About the Future of Conflict," *International Security* (Fall 1996), 139-79.

7. John Keegan closes *The Face of Battle* (New York: Penguin, 1978) with: "But the suspicion grows that battle has already abolished itself"; Martin van Creveld in "High Technology and the Transformation of War," *The RUSI Journal* (December 1992), 61-64, and elsewhere argues that conventional war has become impractical, although other forms of conflict continue.

8. Colonel John D. Waghelstein, "Some Thoughts on Operation *Desert Storm* and Future Wars," *Military Review* (February 1992), 80-83.

9. Howard Banks, "Lessons from the Gulf War," *Forbes* (18 February 1991), 40-2; Eric H. Biass, "The Guided Dispenser: the Ultimate Attack Weapon," *Armada* (August/September 1991), 6-14; Keaney and Cohen, 192.

10. Benjamin Lambeth, "The Technology Revolution in Air Warfare," *Survival* (Spring 1997), 69; US Air Force Materiel Command, Directorate of Science and Technology, Wright Patterson Air Force Base, OH, "FY 97 Conventional Armament Technology Area Plan," 1 May 1996, 7. The great difficulties in assessment have been recognized in the US Air Force Materiel Command where its Wright Laboratory Armament Directorate has a program to develop technology for air-to-surface weapons that will yield instantaneous feedback on the effects of their impact.

11. "Desert Storm: Gulf Victory," *World Airpower Journal* (Summer 1991), 20-27; Ezio Bonsignore, "The Scud War," *Military Technology* (February 1991), 77-9; Group Captain Niall Irving, "The Gulf Air Campaign—An Overview," *The RUSI Journal* (February 1992), 12; Keaney and Cohen, 223.

12. Barry Watts, "Aerospace Power in the 21st Century: A Theory to Fly By," 6. This draft is an alternative report for an Air University strategic air warfare panel composed of Air War College faculty. Panel member Carl Builder suspects there will be few or no more conflicts like *Desert Storm*; he believes nation-states will be the primary actors at least until 2025. For a compact and coherent discussion, see A.J. Bacevich, "Just War: Morality and High-Technology," *The National Interest* (Fall 1996), 37-47, and Russell E. Travers, "A New Millennium and a Strategic Breathing Space," *Washington Quarterly* (Spring 1997), 95-114.

13. See for example, Harry Summers, *A Critical Analysis of the Gulf War* (New York: Dell, 1992), 95-116, and Price T. Bingham, "Let the Air Force Fight Future Land Battles," *Armed Forces International* (August 1993), 42.

14. Kenneth S. Brower and Steven L. Canby, "Weapons for Land Warfare," *The Future of Smart Weapons* (Washington, DC: American Association for the Advancement of Science, 8 February 1992). Brower and Canby remark: "The Iraqis were so inept that air power could have won the war alone, as could have the Army and Marines. Almost any plan would have been one-sidedly successful."

15. LTG Charles A. Horner, "The Air Campaign," *Military Review* (September 1991), 20. For an opposing view, see Alan Gropman, Industrial College of the Armed Forces, "How Much Aerospace Force is Enough for the New World Order?" This speech was given at a conference sponsored by the USAF Deputy Chief of Staff for Plans, Washington, DC, 16 March 1993. Gropman asserts that the centralized command controversy was merely "papered over" during *Desert Storm*. See also BG M.T. Hopgood Jr., "Experience: Handle With Care," *US Naval Institute Proceedings* (October 1991), 81-2. Hopgood remarks: "Joint success on the battlefield promises less interservice competition (cited as a possible "lesson" of *Desert Storm*). This is a lesson likely to be praised with lip service and ignored in practice."

16. B.H. Liddell Hart, ed., *The Rommel Papers* (New York: Harcourt Brace, 1953), 403, quotes Rommel as saying, "The bad weather, despite the difficulties it gave us was actually very much to our advantage, as it prevented the enemy from bringing the full weight of his air force to bear, the effect of which, in the deep, ravine-like valleys, would have been very severe."

17. Bill Sweetman, "Close Air Support: Fighters High, Helicopters Low," *International Defense Review* (November 1992), 1,077-81.

18. Horner, 25. He remarks: "By the time the ground war began, [the Iraqi's] will to fight had been so damaged [no strong resistance existed]. What transpired in the 100-hour ground war serves as testimony of the impact air power can have on the modern battlefield."

19. John M. Collins, "Desert Storm and Lessons of Learning," *Parameters* (Autumn 1992), 83-95. Collins warns against excessive reliance on technological solutions. See also Eliot A. Cohen, "The Meaning and Future of Air Power," *Orbis* (Spring 1995), 193.

20. For arguments on the need for low-cost, low-technology weapons and sufficient mass and combat options for flexibility, see Collins. For rebuttal, see LTG Buster Glosson, "Impact of Precision Weapons on Air Combat Operations," *Airpower Journal*, (Summer 1993), 110-11. Glosson participated in the Gulf War air campaign and is a proponent of the high-tech/air power approach.

21. Among many available references, the following provide more information: "Fraser approves JDAM/JSOW go-ahead; seeker commonality stressed," *Aerospace Daily* (25 June 1992), 494; John Boatman, "USAF, Navy agree on 'smart' bombs," *Jane's Defence Weekly* (29 February 1992), 6; David A. Fulghum, "DAB Approves Development of a Joint Stand-Off Weapon," *Aviation Week & Space Technology* (15 June 1992); "Pentagon to Approve JSOW Development, Initial Work on Direct-Attack Munition," *Aviation Week & Space Technology* (1 June 1992), 28; "USAF Holds Pre-JDAM Test," Aviation Week & Space Technology (5 July 1993), 27; "ATARS Sensors Likely to Find New Homes," *Aviation Week & Space Technology* (5 July 1993), 28; John Haystead, "Autonomous Weapons—Are We Smart Enough for Them?" *Defense Electronics* (February 1992), 29-37, 65.

22. Interrogation of Field Marshall Karl Rudolf Gerd von Rundstedt, 2 September 1945, box 134, *Spaatz Papers*, Manuscripts Division, Library of Congress, Washington, DC.

23. Edward J. Walsh, "Air Force, Navy Precision Weapons Pack Power in Economical Packages," *National Defense* (May/June 1997), 34-35.

24. US Air Force, Headquarters, Air Combat Command/DRPW, "Final Joint CAF and USN Operational Requirements Document for Joint Direct Attack Munition," 23 August 1995.

25. Herman L. Gilster, *The Air War in Southeast Asia* (Maxwell AFB, AL: Air University Press, 1993), 59-73; John A. Doglione et al., *Airpower and the 1972 Spring Invasion* (Washington, DC: Office of Air Force History, 1985).

26. Biddle, 169.

27. Walsh, 34.

28. LTC Steve McNamara, "Assessing Air Power's Importance: Will the QDR Debate Falter for Lack of Proper Analytic Tools," *Armed Forces Journal International* (March 1997), 36.

29. Ibid.; Walsh, 35; Braybrook, 32; John A. Tirpak, "Brilliant Weapons," *Air Force* (February 1998), *53.*

30. Tirpak, 51-52.

31. William S. Cohen, "Report of the Quadrennial Defense Review," May 1997, 40; Roy Braybrook, "Not-too-Close Encounters of the Air-to-Ground Kind," *Armada* (February/March 1996), 36; Clifford Beal, "Bolt from the blue: standoff weapon developments," parts 1 and 2, *International Defense Review* (August 1992); Heinz Hilgendorf, "Are Stand-off Air-to-Ground Weapons a Necessity? *Military Technology* (June 1993), 57-62; Biass, 6-14; John D. Morocco, "Navy Primed for JSOW Critical Design Review," *Aviation Week & Space Technology* (27 February 1995), 48; US Air Force Air Combat Command, "Air Combat Command Operational Concept for the Joint Standoff Weapon," 28 March 1994.

32. Air Force Materiel Command, Directorate of Science and Technology, Wright Patterson Air Force Base, OH, "FY 96 Conventional Armament Technology Area Plan," 1 August 1995, 13; Fulghum, "Small Smart Bomb to Raise Stealth Aircraft's Punch," *Aviation Week &*

*Space Technology* (27 February 1995), 50; US Air Force White Paper, "Precision-Guided Munitions Investment Strategy," 25 April 1995, 19; Tirpak, 53; I-250, "Small Smart Bomb," *Jane's Air Launched Weapons* (11 November 1998), on-line <http://fore.thomson.com/janes>.

33. Ibid.

34. US Air Force White Paper, 8; "USAF plans intertial dispenser selection this month," *Jane's International Defence Review* (January 1997), 10; US Air Force, Headquarters Air Combat Command/DRPW, "Final Operational Requirements Document, Wind-Corrected Munitions Dispenser," 23 September 1994; "Wind-Corrected Munitions Dispenser," *Air Force* (May 1998), 159.

35. Fulghum, "TSSAM Follow-on to Take Shape This Year," *Aviation Week & Space Technology* (27 February 1997), 49; US Air Force Headquarters Air Force/XORW, "Joint Air-to-Surface Standoff Missile, Program Management Directive (PMD) 2389," (1), 2 February 1996.

36. Ibid.; Trevor Nash, "Stand-off and Deliver," *Armada* (August/September 1996), 48-57; Glenn W. Goodman Jr., "Mining Silver Bullets: Navy and Air Force Pursue Longer Range, Autonomous Standoff Weapons," *Armed Forces Journal International* (July 1997), 26-7. As of 1997, the House of Representatives was threatening to cancel the JASSM if the US Air Force failed to make a better case than it had (*Defense Daily*, 23 July 1997, 131), but by 1999, the situation had improved ("JASSM-'Launch & Leave' Subsonic Cruise Missile Design," 1999, Joint Air-to-Surface Standoff Missile, on-line <http://jadamus1.eglin.af.mil:84>).

37. The turning of the tide was much more complex than depicted. The removal of the last place the *Luftwaffe* could hide was significant. William R. Emerson, "Operation *Pointblank*: A Tale of Bombers and Fighters," in Harry R. Borowski, ed., *The Harmon Memorial Lectures in Military History, 1959-1987* (Washington, DC: Office of Air Force History, US Air Force Academy, 1987), 441-72, shows that the ratio of P-47s to P-51s during the crucial hours in February 1944 was something like 9:2.

38. LTG John H. Cushman, *Thoughts for Joint Commanders* (Annapolis, MD: privately printed, 1993).

39. Ibid., 33.

40. Ibid., 39.

41. I do not mean to imply that JDAM and JSOW alone constitute a possible technological revolution. In "The Integration of Technology and Doctrine in the USAF," in Alfred F. Hurley and Robert C. Ehrhart, eds, *Airpower and Warfare* (Washington, DC: Office of Air Force History, US Air Force Academy, 1979), 386-400, Robert Perry argues persuasively that the most significant military changes in the past have not usually arisen from some dramatic and radical technological improvement. He believes significant changes have come from the synergy among several fairly mature technologies each of which was only an evolutionary change. See also Michael O'Hanlon, "Can High Technology Bring U.S. Troops Home?" *Foreign Policy* (Winter 1998-99), 74, and LTC Harold G. Moore and Joseph L. Galloway, *We Were Soldiers Once . . . and Young* (New York: Random House, 1992) for a gripping tale of the battle, including fratricide and CAS as practiced in Vietnam. Incidentally, I am persuaded that not only has the Army Officer Corps a somewhat outdated view of the USAF and its technological capability, but also of the air arm's officer corps. During world War II more than half of the USAAF officers did not have bachelor's degrees; now they all have them, and by the time they are majors it is quite common for them to have master's degrees.

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# Close Quarters Combat and Modern Warfare

by Ray O. Wood III and

Major Matthew T. Michaelson, US Army

Technical advances in modern warfare have compromised the combat needs of individual soldiers who must confront the enemy at some point to complete their missions. New battlefield technology distances the individual soldier psychologically and physically from the enemy. To some people, these developments diminish or eliminate the need for hand-to-hand and rifle-bayonet training at the small-unit level. Consequently, close quarters combat (CQC) training, which encompasses both hand-to-hand and rifle-bayonet skills, is no longer perceived as a mission-essential skill for today's high-tech soldier.

CQC training prepares soldiers to face the enemy in the last six feet of a battlefield. At this range, the most-effective weapon is still an individual soldier trained in hand-to-hand combat and rifle-bayonet techniques: CQC is the final option. With it, soldiers can engage and defeat an enemy face-to-face when retreat or avoidance is not possible and injury, death or capture are the consequence of failure.

## Determinants of Survival in CQC

Three things determine success and survival in CQC: an aggressive mind-set, a survival mentality and skills specifically designed for the type of combat. An aggressive mind-set can be defined as the willingness to kill, maim or injure the enemy as the mission or personal survival requires. A survival mentality enables a soldier to engage an enemy and continue to fight despite pain, injury and the prospect of death or capture. The third determinant—CQC skills—involves the execution of techniques specifically designed to render an opponent unconscious, dead or incapable of fighting.

## CQC Versus Combative Sports

A martial art may be practiced with four different goals in mind: sport proficiency, physical discipline or exercise, mental discipline or as a way of life, and as a means of self-defense. CQC training is a military application of the self-defense goal. Although combative sports (CS) and CQC training overlap, CQC training focuses on combative skills, a specific training environment and an aggressive mind-set not normally part of training.

Fair play and sportsmanship are expected and approved behaviors in all sports. However, fair play and good sportsmanship are inappropriate in CQC and can have unfortunate and even lethal consequences. Both CS and CQC training encourage a soldier to seek and exploit the opponent's or enemy's weaknesses, but in CQC the consequences can be lethal. While the physical, cognitive and affective training in CS somewhat parallels what occurs in CQC training, at the moment of truth in competition, an instructor, coach or referee protects the antagonists from serious injury. There are no referees on the battlefield.

CQC skills are often confused with those of boxing, wrestling, competitive karate or judo. CS techniques are a function of the discipline's style and philosophy. The most prized techniques are those that facilitate scoring under competitive rules. Techniques deemed dangerous or even lethal are modified or prohibited in competition to reduce the possibility of injury.

CQC techniques are practiced because of their effect on an enemy, not because they would facilitate scoring in CS competition. Injurious CS techniques and their underlying abilities can be acquired and honed in a controlled risk environment. However, participation in CS alone can promote attitudes, behaviors

and skills incompatible with CQC focus and an aggressive survival mind-set. In CQC, soldiers may be involved in life-threatening situations that do not entail the same degree of social accountability present in CS competitions.

A final concern when comparing CQC training and CS is the training environment. CQC training is generally conducted in a field environment at the small-unit level. CS training is generally conducted in a gymnasium or training environment structured to optimize learning and sport performance. CS avoids practicing in environments where real-world detractors such as weather, terrain, clothing, equipment and sensory distractions impede performance. Realistic CQC training must include extensive field training to develop an awareness of the conditions that might affect performance. Although field training contributes to skilled performance under real-world conditions, it is not generally an optimal environment for learning the complex motor skills commonly associated with CQC.

## Fear

The fear engendered by unarmed combat is qualitatively different from the fear generated by other types of military training such as parachuting or repelling. Airplanes and cliffs are inanimate objects. A soldier has the option to accept or reject these challenges. However, an airplane or cliff does not run you down, look you in the eye, hit you with an entrenching tool and stomp on your head repeatedly when you are on the ground. The threat in physical combat has a face and a name. It is personal, and it will not stop if you refuse to accept the challenge.

When does a soldier learn to fight one-on-one and in so doing learn to confront death with a face? Normally, soldiers are taught to deal with the risks and fears associated with combat. They practice what they have been taught until they are prepared to meet these challenges. However, no military school or training program is specifically dedicated to developing the coping strategies and skills necessary for survival.

Hand-to-hand training and rifle-bayonet training are practical, low-cost, low-tech means of teaching a soldier how to fight and control the fear inherent in CQC. CQC training at the small-unit level gives soldiers the means to deal with the fear and prospect of a physical confrontation and provides commanders insight into their troops' psyche and combat readiness. Soldiers trained to deal with fear, injury or death in a physical confrontation have confidence in their ability to survive such an encounter and will better deal with these same stresses when they are physically and psychologically more imminent.

## CQC Training as a Coping Mechanism

Soldiers learn to deal with fear through a fear-management technique called "fear inoculation," in which the training intensity level and skill requirements for success are systematically and progressively increased until soldiers attain an established performance standard. The beginning standards are a function of soldiers' entry-level behaviors and affective conditioning. CQC training educates soldiers about the nature of fear in physical confrontations and provides coping techniques—skills, strategies and tactics.

Placing soldiers in a structured CQC training environment sets up the trainee for success. Competence is a foundation for confidence and produces intangible psychological and affective benefits. As they overcome each hurdle, soldiers become aware of their growing competence, and ultimately their confidence increases.

## CQC Training is Essential

It has been argued that CQC training is more mission-essential for some personnel and units than for others. Because a unit's mission determines to some extent the probability and conditions under which a soldier might meet an enemy face-to-face, certain types of missions have a greater potential for face-to-face contact. For support units located in a rear area, however, face-to-face contact with an enemy might be an unexpected consequence of a mission gone wrong or a rear insertion by the enemy. In either case, even a support soldier must be prepared to deal psychologically and physically with the enemy. The reality of combat is that soldiers must deal with the enemy on a personal level at some point for complete mission success.

Infantry units, special operations units and personnel involved in policing duties have a higher probability of physical confrontation with enemy personnel at close quarters than other units. Therefore, these units provide their soldiers with an appropriate set of skills and attitude to deal with face-to-face contact. Units that do not expect a physical confrontation with the enemy normally do not train their soldiers for this contingency. However, basic combative skills must be common throughout all types of units. If a helicopter is shot down and the crew is forced to escape and evade, the members must be prepared to deal with the enemy face-to-face.

An aircrew confronting the enemy will have a different mind-set and repertoire of fighting skills than its infantry or special operations counterparts. Every unit is trained to fight an enemy in a specified context. The emotional states, psychological conditions of engagement and fighting skills are different for these soldiers than for soldiers trained for CQC. However, when an enemy is confronted, the physical challenge and consequences of failure are the same. An unexpected or surprise encounter is even more stressful than an anticipated one, so all units should train for such contingencies. Clearly, soldiers not trained to fight in close quarters might not survive this type of combat.

As the modern battlefield changes and new missions evolve, today's rear echelon could be tomorrow's close-quarters fight. Because we cannot dictate or predict with certainty when and where we will encounter the enemy, we must prepare

all soldiers for the unexpected. For example, police and peacekeeping duties have been added to the mission spectrum. The use of lethal force, which is a hallmark of training for combat missions, is generally not an acceptable first-response option in such conflicts. Units and soldiers must have a complete range of response options that include nonlethal responses to physical conflict. CQC training provides a graduated force option for physical confrontations and concurrently increases the individual's likelihood of survival, regardless of the mission or circumstances.

## Army CQC Training

Rifle-bayonet and hand-to-hand combat were dropped from basic training in the 1970s then revived in the late 1980s. Today, the Army has no designated subject matter experts for CQC or dedicated CQC instructor training program or school. Without an infrastructure for developing skilled CQC instructors, the Army can hardly support unit-level programs.

A drill sergeant certified to teach a four-hour program of instruction (POI) based on US Army Training and Doctrine Command (TRADOC) Field Manual (FM) 21-150, *Combatives*, conducts CQC training during soldiers' initial-entry training.[1] The certification program for drill sergeants is standardized for each Army training center (ATC) but not across different ATCs. Each ATC certifies an instructor to teach a TRADOC-approved POI for each unit. Although the Ranger Training Brigade is the proponent for CQC, it trains instructors in-house to teach a TRADOC-approved POI.

The potential contributions of CQC training to individual soldier's battle readiness and effectiveness are diminished by the lack of a centralized and dedicated instructor-training program. Such a program or school would assess CQC needs at all levels, develop new doctrine and programs and train instructors to conduct and maintain unit-level programs. Unfortunately, the sole institutional resource for CQC doctrine remains FM 21-150.

## Recommendations

CQC has a viable role in training soldiers for modern warfare and should be regarded as essential. In addition, CQC doctrine and training programs should be reviewed with the following goals in mind.

- To assess CQC needs at all levels.
- To develop doctrine and programs to meet established needs.
- To institute an instructor training program.
- To provide instructors to teach and maintain unit-level CQC proficiency.

Implementing a comprehensive dedicated CQC program will enhance soldiers' physical, psychological and effective readiness and serve as a force multiplier when physical contact with the enemy is unavoidable. ***MR***

### NOTES

1. US Army Field Manual 21-150, *Combatives* (Washington, DC: US Government Printing Office, date unknown).

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# Data Analysis and Decision Making

by Colonel Ronald E. McRoberts and
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Recently, the Minnesota adjutant general's highest strategic priority has been strength and strength maintenance. However, the lack of rigorous analyses of causal relationships means that objectives and programs that support such strategic ends are based mostly on assumptions and anecdotal evidence.

To determine factual and supportable evidence, the special-projects section and the training division of the Plans, Training and Operations Directorate of the Minnesota National Guard State Area Command (STARC-MN) statistically analyzed data obtained from operational readiness reports and evaluations to determine how unit performance affects retention. These analyses revealed strong relationships between a measure of strength management and measures of unit performance. Although the findings confirm previous assumptions and anecdotal evidence, they provide the rigorous analyses necessary for confident decision making and program formulation.

## Research Parameters

The annual battalion attrition rate as reported on the unit status report (USR) was selected as the strength measure for analysis because:

- The annual battalion attrition rate is objective, easy to calculate and readily available.
- For each company-size unit the adjutant general established an unambiguous, annual attrition-management objective of 18 percent.
- The annual attrition rate is regarded as the most sensitive of strength measures to unit performance.
- The quantitative nature of attrition rate facilitates statistical analyses.

**Attrition rates.** To avoid some of the variability present in rates for companies within the same battalions, battalion attrition rates rather

than company attrition rates were selected. This decision is justified on the basis that all companies in a battalion operate under the same general training and performance guidance. In addition, data for several small battalions were aggregated for both the troop command and the aviation brigade.

In the search for factors related to annual battalion attrition rates, variables considered included, but were not limited to, weapons qualification, annual training attendance, percent educationally qualified, Army Physical Fitness Test pass rates, USR-reported variables and inspection results. When variables were reported more frequently than annually, the value reported at the end of the fourth quarter was selected because of its correspondence with the end date for calculating annual attrition rates. As with attrition rates, data were aggregated at battalion level with the exception of the troop command and aviation brigade.

**Inspection results.** Inspection results were obtained from archived data from Minnesota Operational Readiness Evaluations (MORE), which is the adjutant general's organizational inspection program for the Minnesota Army National Guard (MNARNG). MORE is a comprehensive evaluation of company-size units that combines all STARC-MN regulatory inspections, nonregulatory inspections, evaluations and staff inspections. MORE evaluates all MNARNG company-size units on a rotating basis with approximately 20 units evaluated each year. MORE's focus is objective evaluations in six functional areas: personnel, safety, security, training, mobilization and logistics. Functional areas are divided into categories, categories are divided into tasks, and tasks are classified as critical or noncritical. Evaluations are based on established checklists and consist of either a GO or NO-GO for each task. A NO-GO for a single critical task results in a NO-GO for the entire category. The percentages of categories receiving GOs in each of the six functional areas were analyzed as possible factors related to attrition.

## Analyzing the Factors

An initial screening of variables for relationships with annual battalion attrition rates indicated further analyses were warranted for three variables:

- The duty MOS qualification (DMOSQ) rate as reported on the USR.
- The percentage of GOs in the MORE-training (MORE-T) functional area.
- The percentage of GOs in the MORE-personnel (MORE-P) functional area.

The analyses focused on describing and interpreting relationships between the annual battalion attrition rate and these three variables.

Analyses consisted of fitting straight lines to the attrition rate versus DMOSQ, MORE-T and MORE-P data. In statistics, the fitting technique is known as "linear least-squares regression" and consists of the following steps:

Step 1. A statistical model for the straight line is formulated as

$$Y=\beta_1+\beta_2X+\epsilon,$$

where Y is the annual battalion attrition rate and is referred to as the dependent variable; X is either DMOSQ, MORE-T or MORE-P and is referred to as the independent variable; $\beta_1$ and $\beta_2$ are coefficients to be estimated; and $\epsilon$ is a residual component corresponding to the distance between the point and the fitted straight line.

Step 2. The values for the coefficients are determined so the sum of the squared distances between data points and the hypothesized straight line is minimized.

Step 3. The statistical significance of the fit of the line is assessed.

The meaning and use of statistical significance warrants further discussion. Many statistical techniques are used to infer relationships for populations based on analyses of population samples. For these attrition analyses, the population is considered to be all MNARNG battalions in the current era, while the sample consists of battalions for which attrition rates, DMOSQ, MORE-T and MORE-P are available for the training year 94 through 98 period.

When basing an inference on a sample, there is always a chance that the sample will not adequately represent the entire population and that the inference will be incorrect. P denotes the probability of an incorrect inference, termed the "statistical significance," and depends on the number of observations, the number of coefficients in the model and the variability of the data around the fitted line. P values are also used as measures of the strengths of relationships, with smaller P values indicating stronger relationships. In the scientific literature, relationships are generally not reported as significant unless P is less than or equal to 0.10, but more frequently, not unless P is less than or equal to 0.05.

## Results

The results of the linear regressions indicate that the strengths of the relationships between the annual battalion-attrition rate and the three independent variables vary. For DMOSQ, P=0.005 indicates a highly significant relationship. For MORE-P, P=0.23 indicates a relationship that is worth considering but is not conclusive. For MORE-T, P=0.07 indicates a significant relationship. The results for DMOSQ and MORE-T are generally as expected: the annual battalion attrition rate decreases as the value of the independent variable increases.

An additional independent variable, the minimum value of MORE-P and MORE-T (MIN(P,T)) was also analyzed and found to be importantly related to attrition with P=0.01. To illustrate the nature and strength of this relationship, the plots were augmented with a horizontal line depicting the adjutant general's attrition-management objective and three natural groupings of the data with respect to MIN(P,T). The strength of the relationship is apparent when noting that in grouping A, which corresponds to the lowest MIN(P,T) scores, none of the battalions achieved the attrition-management objective, while in grouping C, which corresponds to the highest MIN(P,T) scores, only one battalion failed to achieve the objective. No such relationship was evident for the maximum of MORE-P and MORE-T.

The relationship between attrition and MIN(P,T) is interpreted as meaning that MORE-P and MORE-T are simultaneously and jointly related to attrition. In particular, the relationship suggests that poor performance in only one of the two areas—personnel or training—is sufficient to adversely impact attrition, regardless of performance in the other area. Thus, excellent personnel support throughout a battalion might not be able to compensate for poor training. Similarly, excellent training might not be able to compensate for poor personnel support. Quality in both areas is necessary in order to retain quality soldiers.

## Conclusions

Although caution must be exercised in inferring causal relationships from simple statistical analyses, two conclusions from this study—one particular and one general—appear warranted. The particular conclusion is that the strengths of the relationships between attrition and DMOSQ and between attrition and MIN(P,T) provide convincing evidence that the adage "Ignore your soldiers, and they will go away," could cease to be homily and become fact. Attrition-management programs that do not address duty MOS training, personnel support and company-level training will most likely fail.

Simple statistical analyses should be further investigated as a means of establishing quantitative relationships as the basis for decision making and program formulation. User-friendly computer databases—for archiving inspection and readiness data—and statistical software—for analyzing these data—provide alternatives to reliance on assumptions and anecdotes.

*Colonel Ronald E. McRoberts is a member of the Individual Ready Reserve. He received a B.A., an M.S. and a Ph.D. from the University of Minnesota and is a graduate of the US Army Command and General Staff College. He has served in a variety of command and staff positions with the Minnesota Army National Guard. He is a mathematics statistician with the US Department of Agriculture, Forest Service.*

*Colonel Timothy J. Sanken is commander, 175th Regiment, Minnesota National Guard. He received a B.A. from St. Cloud State University and is a graduate of the US Army Command and General Staff College. He has served in a variety of command and staff positions in the Minnesota National Guard. He is employed by the 3M Company.*

# MR Letters

## The Worst Case

The article by Major Gregory A. Pickell, "Planning for Major Theater Wars: Examining the Worst Case," in the January-February 2000 issue of *Military Review*, is interesting for the amount of research he did. Unfortunately, the article is fundamentally flawed. Some of Pickell's basic premises are either untrue or based on an inaccurate interpretation of the facts. Because I spent the last five years at BCTP in the study and application of Army doctrine, I question Pickell's grasp of the subject.

On page 43, Pickell states: "2ID [2d Infantry Division] will likely not perform well at the tactical level. The reasons for this are manifold, and they include flawed defensive tactical doctrine and inappropriate weapon system technologies. . . ." Unfortunately, he does not significantly document this assertion or suggest an improvement.

On page 44, supported by Figure 2 on page 45, Pickell discusses a notional defensive concept for the 2d ID. I use the term "notional" because this is not the 2ID plan. Pickell also overlooks the 20-plus Republic of Korea divisions that will be involved in South Korea's defense. Pickell states: "Perhaps the greatest doctrinal disconnect regards US tactical defensive doctrine, which requires defense in depth coupled with a symmetric battlefield approach." This statement reflects a complete misunderstanding of Army doctrine. There are no entries in Field Manuals 71-100, *Division Operations*; 71-3, *The Armored and Mechanized Infantry Brigade*; or 7-30, *The Infantry Brigade*, that support this conclusion. Note 12, which Pickell uses to support this assertion does not reference a source and is obviously his own conclusion, which again is doctrinally incorrect. The note asserts that this array would result in no reserve. While this might be true, Army doctrine highly recommends the retention of a reserve, especially when enemy intentions are unclear.

The Army's patterns of defense give a commander two choices: an area defense, which is further divided into forward and in-depth variants, and a mobile defense, which concentrates combat power to strike the enemy in a decisive fashion. There is nothing in Army doctrine that "requires" one over the other.

On page 44, Pickell asserts that the TOW missile is "dangerously inappropriate," but he does not present any facts to support this position. In my initial assignment, I served in the 2ID as a weapons platoon leader in a straight-leg infantry battalion (H series), which included 81-millimeter mortars and TOW missiles. Korea has multiple areas where the TOW would be of considerable value, especially in the primary historical invasion route, the Chorwon Valley.

I assume Pickell is a product of the CGSC system, either as a resident or in a Reserve Component, and I believe his article points out one of the major flaws in the current form of

CGSC. The Army does not require graduates to have a complete and accurate grasp of doctrine. The same thought applies to the military decision-making process, which is widely maligned because of a lack of understanding of how it works.

Reading Pickell's professional biography, which is understandably brief in this context, I am struck by the fact he appears to have no practical experience in the areas he attacks. I do not believe you need to fight a war to understand the concept, but Pickell appears not to understand weapons applications. Even if everything he said were true, what doctrinal change does he recommend, and what weapon should replace the TOW in Korea?

**LTC Jack E. Mundstock,** ***USA,***
***28th Field Training Group,***
***Fort Meade, Maryland***

## Fundamental Right

While I appreciate many of LTC Jack E. Mundstock's comments regarding my article, I must take issue with his criticism of me and many of the arguments I presented. Though Mundstock's defense of current US military policy in Korea is understandable, I suspect his time in BCTP has made it difficult for him to examine this contentious issue from an unbiased perspective.

Mundstock notes that the scenario outlined in the article is not the actual plan for the peninsula's defense. As he is aware, describing the plan itself would require discussing classified data, certainly an unacceptable alternative. The article never states that the scenario described is the actual 2d Infantry Division plan.

Mundstock's criticism of the CGSC system is also surprising. He argues from the perspective of a doctrine expert and is clearly implying that his doctrinal expertise did not come from Leavenworth. This in turn suggests that he developed his expertise through self study and informal professional development, which I applaud—his approach mirrors my own in many ways. Yet he notes that my background does not qualify me to talk about Korea. My question is then, what qualifies Mundstock as a doctrine expert if not Leavenworth? While the CGSC system is certainly imperfect, it nonetheless performs a critical function in officer development.

I do agree with Mundstock on one important point. Neither of us has fought a war on the Korean peninsula, though I have found my way to two war zones in the past decade.

While Mundstock's technical comments are welcome, I found his remarks regarding my qualifications as well as his criticism of CGSC unfortunate. Attacking points made during the course of an argument is an important part of the learning process; attacking an author's right to make the argument is simply inappropriate.

**Major Gregory A. Pickell,**
***USANG Readiness Center,***
***Alexandria, Virginia***

## Information Request

I am doing research for a book on Lieutenant General Walton "Bulldog" Walker, Eighth Army Commander during the Korean War. I would like to receive any information about him and his Korean War service. I am also seeking information on his son Samuel Sims Walker, who graduated from West Point in 1946 and served in the 24th Division in Korea. I can be contacted at, missfiresioux@cs.com, FAX 301- 449-7638 or phone 301-449-1413.

**Colonel Suellyn Wright Novak,**
***USA, Temple Hills, Maryland***

## Marshall Myth

I am continually amazed and bitterly disappointed to find the S.L.A. Marshall ratio-of-fire myth alive and well in today's Army. I refer to Major Kelly C. Jordan's use of that myth in "Harnessing Thunderbolts" in the January-February 2000 issue of *Military Review*. Like many of his peers, Jordan apparently does not know that Marshall's ratio-of-fire has been debunked. If he is unaware of why the debunking, I will gladly send him the information.

I commanded a rifle company in the 84th Infantry Division in northwest Europe for four months during three campaigns from 1944 to 1945 and have disputed Marshall's findings ever since they first appeared in the old *Infantry Journal* in 1946-1947. Marshall never spent a day in combat with any infantry unit in Europe but claimed to have first-hand experience. I want to point out again that Marshall's ratio of fire has no substance. I would bet that every West Point cadet believes in it, judging from the number of instructors at the Academy who apparently believe it.

My major complaint with Jordan's article, though, centers on Marshall's Operations Research Office (ORO) study, which he did for Johns Hopkins University in 1951. I have an original copy of the study, but I am certain its pagination is the same as the copy Jordan uses. Jordan also states that he uses information that can be substantiated from other "than Marshall's own somewhat suspicious data and a secret formula that died with him in 1977" to demonstrate that "the American infantry platoon's ratio of fire increased from a high of 25 percent in World War II to approximately 55 percent by the end of the Korean War." Secret formula? Get real! Other sources? Footnote 6 does not list those sources, but Jordan does tell us in that same footnote that he is publishing another article in a different publication on the same subject. Perhaps he will list those "other" sources with that article. I am looking forward to reading it.

I would refer your readers to the ORO study, pages 59-62. In those pages, Marshall tells how he arrived at his figure supporting the statement that "well in excess of 50 percent of troops actually committed to ground where fire may be exchanged directly with the enemy will make use of one weapon or another in the course of an engagement." He then qualifies his estimate: "In the Korean fighting, there is manifestly a higher percentage of participation by riflemen . . . than in operations during World War II. This can be felt, rather than accurately counted, and therefore, it is difficult to arrive at an accurate percentage figure indicative

of the increase. However, *averaging out the night and day operations* (emphasis mine) . . . it is considered that . . . well in excess of 50 percent used a weapon." What a reliable system!

Marshall also points out the differences between offensive and defensive operations and the different ratios of fire between the two types of operations. He excuses the soldiers in Korea from firing during an offensive operation because of the terrain, but I do not remember him giving us the same slack in Europe during World War II.

In my opinion, Marshall's findings in Korea are as much a myth as are his World War II findings, at least as far as a ratio of fire is concerned. Yelling, screaming, shouting at each other? In the defense? Fine. In the offense? Seldom is this sort of thing necessary, except occasionally by leaders. But Marshall loves this sort of thing, so let us make his followers happy.

Finally, did my men fire? I haven't the slightest idea, and I question whether any other company commander in northwest Europe during 1944 and 1945 went around after an action checking to determine who did and who did not fire. I remember querying a senior officer who had commanded a company at Hamburger Hill during the Vietnam War on this subject. He assured me every one of his men fired, despite the fact a number had been killed or seriously wounded before they ever got into close firing range. I wanted to know how he knew his men fired. He just knew they did, that's how. Sounds like S.L.A. Marshall, doesn't it?

**LTC Albert N. Garland,**
***US Army, Retired,***
***Columbus, Georgia***

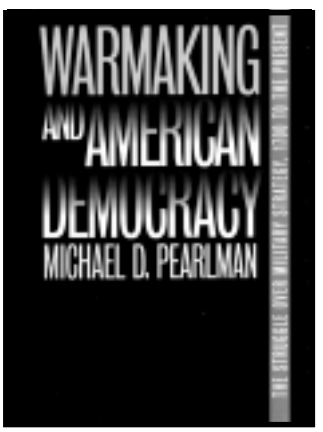
# MR Book Reviews

**WARMAKING AND AMERICAN DEMOCRACY: The Struggle Over Military Strategy, 1700 to the Present,** by Michael D. Pearlman, University Press of Kansas, Lawrence, KS, 1999, 441 pages, $45.00.

Michael D. Pearlman's unique book, *Warmaking and American Democracy*, offers the first truly American perspective on the evolution of US military strategy. Most studies of US warmaking give a Eurocentric critique fundamentally incommensurate within a democratic political framework.

The Eurocentric critique is the Clausewitzian-authoritarian formulation that elevates the force of political reason and authority—embodied in the king as political leader and military commander in chief—above the people and the military. The democratic critique, developed by Pearlman, places the Clausewitzian "trinity" under the force of law and the legal institutions of the state. The constraints and restraints of democratic legal institutions on political and military decisionmaking give US warmaking its unique quality and character.

Shortly after the Civil War, the Federal Army was removed from the president's executive control and placed under congress's legislative authority—an inexplicable relationship within the Clausewitzian framework. Pearlman iterates that many apparent conflicts over strategy were in fact clashes between political-strategic frameworks. One of the most intense clashes occurred between President Harry S. Truman and General Douglas MacArthur in the early 1950s. Steeped in the Eurocentric warrior's tradition, MacArthur evidently could never completely understand that the US Constitution stood above matters of strategic interest and that security issues extended beyond the defense of state borders and embraced the security of a piece of paper.




Pearlman shows that the inherent tension between Constitutional authority and political-strategic freedom of action becomes most intense when the object of war is vague and national motivation is weak. For example, the Vietnam War revealed the consequences for a democracy when it is forced to clarify war aims and steel national resolve in the face of immovable, constitutionally guaranteed individual rights.

Pearlman provides a broad, synoptic and penetrating study of American warmaking and strategic formulation within the framework of democratic constitutional political institutions. As such, the work provides a new basis for an American interpretation of Carl von Clausewitz's classical study, *On War* (Viking Press, New York, 1983, $12.95).

**James J. Schneider,**
***School of Advanced Military Studies,***
***Fort Leavenworth, Kansas***

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**WAR ALONG THE BAYOUS: The 1864 Red River Campaign in Louisiana** by William Riley Brooksher, Brassey's, Washington, DC, 1998, 287 pages, $27.50.

Vicksburg is captured. The Union controls the Mississippi River. The South is split. The Confederate trans-Mississippi is isolated; Louisiana, Arkansas and Texas can no longer contribute to the Confederate war effort. Why then did the Union launch a combined Army-Navy operation up the Red River into Texas?

A campaign is not always based on military considerations. The attack up the Red River was for political and economic reasons. France, challenging the Monroe Doctrine, was actively trying to conquer Mexico. A French Mexico posed several threats to the Union. By becoming a major outlet for the sale of Southern cotton, Mexico could also become a source of revenue to the Confederacy. Three years worth of cotton was stored throughout the South because only a small percentage had been successfully exported. By seizing the Red River cotton, the Union could earn a tremendous profit.

France and the Confederacy as trading partners might increase the chances of official French recognition of Confederate President Jefferson Davis's government. There was a real fear that France would support an independent Texas or demand the return of Texas to Mexico.

The combined nature of the campaign provided a unique set of issues and problems. Interservice rivalries, poor planning, lack of coordination and cooperation, low water in the river and the lack of water and provisions in the countryside all contributed to Union failure. William Riley Brooksher covers both sides of the campaign as well as its preparatory phase and aftermath and examines leading commanders' personalities.

This book is highly readable and easy to comprehend. The maps are simple and descriptive. The bibliography is extensive and offers many sources for the serious student. While the Red River Campaign is but a sideshow in the Civil War, its study offers valuable lessons.

**MAJ William T. Bohne,**
***USA, Retired,***
***Leavenworth, Kansas***

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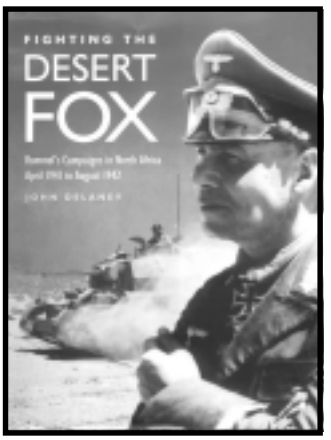
**FIGHTING THE DESERT FOX: Rommel's Campaigns in North Africa, April 1941 to August 1942,** by John DeLaney, Arms & Armour Press, London, 1998, 160 pages, $29.95.

The exploits of German Field Marshal Erwin Rommel and his renowned




Afrika Korps have long captured the interest of military historians and amateur enthusiasts. In many ways, this was the most noble theater of the war because of the absence of a significant civilian population, occasional chivalry on both sides and exciting sweeps of armored formations against North Africa's exotic backdrop. John DeLaney argues convincingly, although not flawlessly, that there is more to be learned about this important campaign.

Monographs dealing with the subject have generally focused on either British success or Rommel's abilities. DeLaney takes a different tack, focusing on the time of weakest Allied performance, suggesting that under a debilitating succession of commanders, the British were largely unsuccessful against Rommel because of poor command structure and tactical leadership. The various British commanders never capitalized on his weakest area—logistics—until British General Bernard Montgomery took command of the British 8th Army in August 1942 and implemented a cautious, deliberate war of attrition.

DeLaney does not gloss over British or German weaknesses but devotes great attention to deficiencies during this often-neglected period. Each of the book's seven chapters is an independent essay in which DeLaney analyzes Axis and Allies strengths and shortcomings as the North African Campaign unfolds. Chapter Four, "Operation 'Crusader,'" covering the only major British success, is most insightful. Although clearly impressed with the Desert Fox's abilities, DeLaney does not spare Rommel. He rightly faults Rommel for being carried away with his own success and vastly overextending his logistic support.

Overall, the book is a welcome addition because of its novel focus on a less-than-flattering period of British military history even though the larger topic has already received extensive investigation. The book is profusely illustrated with many excellent photographs and good maps, but the missing footnotes and bibliography are serious omissions. Other minor factual errors, such as improperly identifying German Colonel General Friedrich Paulus as "von Paulus," are annoying but do not diminish the work's importance.

**MAJ Kevin W. Farrell, *USA,***
***Fort Leavenworth, Kansas***

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**IF WAR COMES TOMORROW? The Contours of Future Armed Conflict** by General Makhmut Gareev, edited by Jacob W. Kipp, Frank Cass Publishers, Portland, OR, 1998, 182 pages, $22.50.

Books about the future of armed conflict and the world's security environment abound. Many regurgitate old ideas with a new flair, but few propose truly innovative thoughts on the future. *If War Comes Tomorrow* by retired Russian General Makhmut Gareev, originally written in 1995 and translated into English in 1998, stands out in the context of today's global environment. It combines thoughts on the past, revolutions in technology, warfare and political structures and makes predictions worth considering.

Gareev develops his thoughts by analyzing political and military technical factors that could serve as catalysts for future conflict and necessary military reforms. He warns of two dangers that all military scholars should consider—the assumption that the development of military art is so complex that no forecast will have any true value and the tendency to turn a forecast into advocacy for a specific weapon system or military structure that then becomes an absolute. Gareev stresses that

credible forecasts must balance analysis of past military experience with contemporary radical change.

Two current, profound changes serve as catalysts for what Gareev calls radical breaks in military art. First is the transformation of the international system after the Cold War and resulting political, economic and social realignments. Second is the revolution in military affairs caused by development of advanced precision weapons, electronic warfare and information warfare, which calls for a total analysis to provide an enlightened look into the future.

Gareev believes the decline in ideology as a source of friction has been replaced by sociopolitical, economic, territorial and ethnic factors that are the new fuels of conflict. While acknowledging that the possibility of a nuclear conflict or large-scale conventional war has declined, Gareev believes small-scale regional conflicts over economic, ethnic or cultural issues could evolve into large-scale conventional conflicts. He also believes B.H. Liddell Hart's theory of indirect approach continue to hold merit. Small states will use subversive action and local wars as means to a new end. Preventing conflict and localizing problems by sanctions and international pressure take on new importance.

The book also offers insight into the future of Russia's military. Despite Russia's current political and economic troubles, the country should not be discounted in light of its ability to overcome obstacles and still make evolutionary contributions to military art.

**MAJ Sean R. Rice, *USA,***
***Fort Leavenworth, Kansas***

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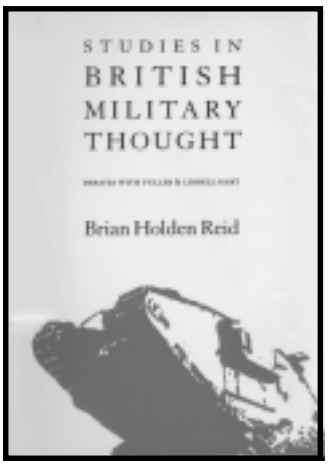
**TO FIGHT WITH INTREPIDITY** by John Lock, Pocket Books, New York, NY, 1998, 602 pages, $6.99.

*To Fight With Intrepidity* is by far the best all-inclusive history of any facet of combat arms I have ever read. John Lock, a ranger-qualified US Army major, meticulously presents the entire history of the US Army Rangers in this long-awaited book, which is smartly compartmentalized, thoroughly exhaustive and intellectually stimulating.

Lock not only chronologically describes Ranger units' actions in every conflict, he properly analyzes each. He includes numerous appendixes, describing everything from "the truth" behind Rogers Rangers' standing orders to a list of Ranger Medal of Honor winners.

Lock interviewed many Rangers who had been in Somalia and offers insight into what actually occurred there in October 1993. The book contains intriguing quotes and compelling evidence. In addition, Lock correctly describes the "modern" Rangers, beginning with the formation of Darby's Rangers.

**MAJ Dominic J. Caracillo,**
***USA, Fort Benning, Georgia***




**STUDIES IN BRITISH MILITARY THOUGHT: Debates with Fuller and Liddell Hart** by Brian Holden Reid, University of Nebraska Press, Lincoln, NE, 1998, 287 pages, $50.00.

In *Studies in British Military Thought*, distinguished British military scholar and professor of war studies Brian Holden Reid surveys the writings of J.F.C. Fuller and B.H. Liddell Hart. The collection of 12 essays incorporates feedback gained from military professionals Reid met while teaching at British and US staff colleges.

Reid says one gains an accurate "appreciation tempered by criticism" of these "true pioneers" who examined many "complex and fascinating connections between strategy, operational art and tactics within their broader study of war as a social and political phenomenon." Reid also suggests that Fuller and Liddell Hart's ideas and efforts to develop new systems, organizations and doctrine are especially relevant today as the Army attempts to exploit the ongoing revolution in military affairs.

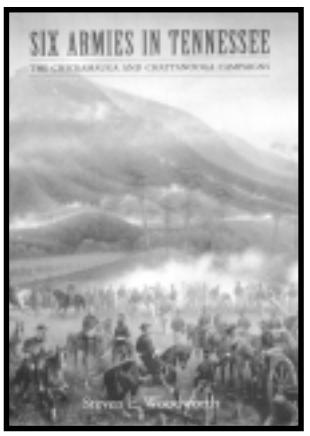
To explain Fuller and Liddell Hart's ideas, Reid concentrates on their concept of strategic paralysis—the enemy's dislocation and demoralization in lieu of his physical destruction, now called maneuver warfare. Reid portrays Fuller as being focused on the tactical and operational levels of war but shows how both thinkers struggled with the paradox of mechanization; the increase in offensive mobility brought about a decrease in defensive protection, if the enemy's command was capable. Thus, maneuver warfare turns into attrition warfare: they are two sides of the same coin.

The "supreme importance of technology" resonates today. Mechanization helps armies penetrate and attack the enemy's rear. But, mechanization also helps armies counterattack against that penetration's exposed flanks. Information-Age technology, dominant battlespace knowledge and advanced weapon systems help armies penetrate and attack throughout the depth of the entire theater with some technological vulnerability but less overall risk. Indeed, Reid reveals that the four operational concepts in *Joint Vision 2010*–dominant maneuver, precision engagement, full dimensional protection and focused logistics—have historical origins in Fuller and Liddell Hart's works.

*Studies in British Military Thought* is a valuable assessment, incorporating current concepts of the operational level of war. Fuller writes: "Technology could accentuate a capacity to destroy military organization on one side while protecting it on the other. Accordingly, morale would be strongest in the best equipped and protected armies and weakest in the more vulnerable." The improved ability to dislocate and de-

moralize the enemy—that is, create strategic paralysis—makes maneuver warfare a feasible and preferable alternative to attrition warfare.

**MAJ M.W. Johnson,** ***USA,***
***Fort Leavenworth, Kansas***




**SIX ARMIES IN TENNESSEE: The Chickamauga and Chattanooga Campaigns** by Steven E. Woodworth, University of Nebraska Press, Lincoln, NE, 1998, 257 pages, $29.95.

Although military historians have written extensively on the battles of Chickamauga, Lookout Mountain and Missionary Ridge in Tennessee, a study of the entire campaign has been missing. Steven E. Woodworth fills this void but with a work that compresses these significant campaigns into too few pages. Some words on how important eastern Tennessee was to President Abraham Lincoln and how the operations fit into the overall Union strategy would have been helpful.

Woodworth is correct in his view that military actions from June through early December 1863 were one continuous operation. Confederate General Braxton Bragg's Army of Tennessee was in defensive positions near Tullahoma in June, but by mid-December they were retreating toward Atlanta. After his victory at Chickamauga, Bragg lost at Chattanooga, and a Union force occupied Knoxville. In consequence, Tennessee was lost to the Confederacy.

Historians Glenn Tucker and Peter Cozzens provide excellent descriptions and analyses of the Battle of Chickamauga. Wiley Sword and James McDonough do the same for the battles around Chattanooga. What has been lacking is an analysis of Tullahoma.

Most historians paint Bragg as an argumentative, unpopular, inept general who owed his position to Confederate President Jefferson Davis. Woodworth takes a more sympathetic approach. While he places some well-deserved blame on Bragg, he also emphasizes his officers' ineptitude, jealousy and outright disobedience. The fiasco at McLemore's Cove, where the Confederates missed an opportunity to bag a Union division, and Leonidas Polk's flawed attacks were a direct result of subordinate generals failing to carry out explicit orders.

The book's most frustrating shortcoming is the lack of maps. Woodworth devotes considerable space to describing roads, creeks and bridges, but there is no specific map. The general map of the area does not identify the locations or movements the text mentions.

Despite its faults, the book highlights a neglected area of the campaign. The book's preface proclaims: "The road to Atlanta—and to Durham Station—began at Chattanooga." I disagree. The book proves that the road actually began at Tullahoma.

**LTC Richard L. Kiper,**
***US Army, Retired,***
***Leavenworth, Kansas***

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**APOCALYPSE THEN: American Intellectuals and the Vietnam War, 1954-1975,** by Robert R. Tomes, New York University Press, NY, 1998, 293 pages, $50.00.

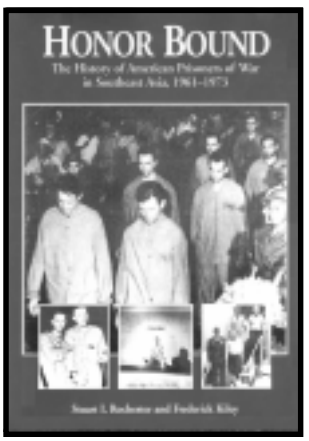
Robert R. Tomes, historian and associate dean, St. John's University, New York City, uses Joseph Conrad's thoughts on imperialism from *Heart of Darkness* (Penguin Great Books, New York, 1999, $8.95) as a metaphor for the US misadventure in Southeast Asia. Like the novelist examining the imperial impulse, the historian views the Vietnam episode as culturally consuming and intellectually comprehensive—an all-encompassing experience.

In six chapters, Tomes quickly describes the American liberal, political and intellectual consensus surrounding Vietnam-era policy and delineates the way it fractured at crucial points. He characterizes the liberal consensus through the mid-1960s as grouped around two shared fundamental tenets: civil libertarianism and international anticommunism. Although different individuals disagreed in their emphasis of the two fundamental principles, all shared them. They saw themselves as moderates in a dangerous world.


Tomes examines evolving ideas, presented in various opinion journals of the period, as foci because they established positions around which thinkers gathered. He also shows clearly how the liberal consensus shattered; how the memory of the optimism, confidence and arrogance that led to Vietnam has faded; and how difficult it is to explain that history to younger generations.

The book illuminates an interesting period in contemporary US history and sets the breakdown of the liberal Cold War consensus firmly in the context of the Vietnam War. Tomes shows the power of intellectuals' ideas and ideals in US policy and history, who considered ideas and ideals greater than themselves and acted accordingly.

**Lewis Bernstein,** ***Combined***
***Arms Center History Office,***
***Fort Leavenworth, Kansas***




**HONOR BOUND: The History of American Prisoners of War in Southeast Asia, 1961-1973,** by Stuart I. Rochester and Frederick Kiley, US Naval Institute Press, Annapolis, MD, 1999, 704 pages, $38.95.

To describe *Honor Bound* as comprehensive fails to do Stuart I. Rochester and Federick Kiley justice. This surprising book compels hyperbole. The authors deliver a first-rate account of not only US prisoners of war experiences but of all allied and western civilian prisoners held by the North Vietnamese, the Viet Cong and the Pathet Lao as well as those held by various factions in Cambodia.

Rochester and Kiley are meticulous and objective; however, unlike the authors of many official histories, they do not succumb to institutional bias. They reveal Department of Defense (DOD) bureaucratic foolishness and the cynical use of prisoners as propaganda while also recounting the outrageous treatment prisoners received from the North Vietnamese and their allies.

Early DOD policy stipulated that prisoners were to be called "detainees" in order to avoid playing into the hands of North Vietnamese who described captured Americans as rogues and criminals. The United States changed the policy only as the number of prisoners increased and as outrage by the prisoners' families mounted.

The authors also clearly and concisely demonstrate the vastly different experiences of prisoners depending on their age, experience, location of capture and time of imprisonment. From the outset, with varying degrees of success and sophistication, the North Vietnamese attempted to use the prisoners as political weapons. They were never really interested in gleaning intelligence; they wanted political statements. Physical abuse, isolation, starvation, bribes and lies were North Vietnamese tools.

For their part, the prisoners developed their own chain of command and clung to the military Code of Conduct. Most realized they were still at war, however helpless they were. In the north, where there were the largest number of prisoners, the prisoner chain of command and the ability to fight back were most robust. However, even in the smallest enclave, prisoners tried to do what they believed was right. Rochester and Kiley tell the story brilliantly, revealing a campaign years in duration fought by men and a few women whose achievements are remarkable and largely unknown.

The care Rochester and Kiley take to remain objective and dispassionate in telling the story serves to highlight the criminal behavior of the North Vietnamese and their allies. More perturbing still is the conduct of those who opposed the war and made the prisoners' lot worse by aiding and abetting their jailers. Jerry Ruben, Jane Fonda and their ilk come off just as they deserve.

*Honor Bound* is a first-rate history of heroes in this sad US political and military experience. Those unfortunates, captives in the hands of Stalinist jailers who had no regard for the conventions of war or fundamental humanity, served bravely under the most difficult conditions. A few crossed over to the enemy, but most were brave and demonstrated courage and compassion of heroic proportions.

**COL Gregory Fontenot,**
***US Army, Retired,***
***Lansing, Kansas***

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**BLACK HAWK DOWN: A Story of Modern War** by Mark Bowden, Atlantic Monthly Press, New York, NY, 1999, 386 pages, $24.00.

*Black Hawk Down* tells the full story of the gunfight in Mogadishu, Somalia, that erupted in October 1993 after a Ranger-supported Delta Force "grab" of several of warlord Mohammad Farrah Aidid's top men.

Mark Bowden's account is action-packed, fast-paced and well written as when he describes how "half the city of Mogadishu was massing and closing in on them. Men would dart out into the street and shoot off bursts from their AKs and then take cover. He could see the telltale flash and puff of RPGs being launched their way. . . . One of the Black Hawks flew over and Eversmann stood and stretched his long arm in the direction of the fire. He watched the crew chief in back sitting behind his minigun and then saw the gun spout lines of flame at targets up the street and, for a short time, all shooting from that direction stopped. That's our guys."

Bowden focuses on combat, but does not neglect forward support: "Kowaleski's left arm was gone. One of the Air Force nurses would find it, to her horror, in his pants pocket where Specialist Hand had placed it." Bowden interjects Somali characters and points of view in just the right places and ways. For instance, one local wonders, "Who were these Americans who rained fire and death on them, who came to feed them but then had started killing? From where he sat, Abokoi could see the mob descend on the Americans. He saw his neighbors hack at the bodies of the Americans with knives and begin to pull at their limbs. Then he saw people running and parading with parts of the Americans' bodies."

Beyond the shooting but within the natural story line, Bowden provides several valuable lessons that will apply in similar missions and comparable environments. Operational trends and near- to long-term projections clearly indicate that many larger-scale commitments of US land forces in the next decade will be in similar places—failed or failing states in the third world. Similar peace operations in a semipermissive environment will likewise include the potential for short but intense combat action and involve comparable issues—religious, ethnic and other rivalries mixed with signifi-

cant or overwhelming humanitarian concerns.

Tactical-level lessons from the gunfight range from the obvious (do not leave your night-vision devices behind just because your plan is to complete the mission during daylight) to the obscure (carefully choose and mix your combat load for a variety of targets—special 5.56-millimeter ammunition that can go right through a man and leave him standing and fighting).

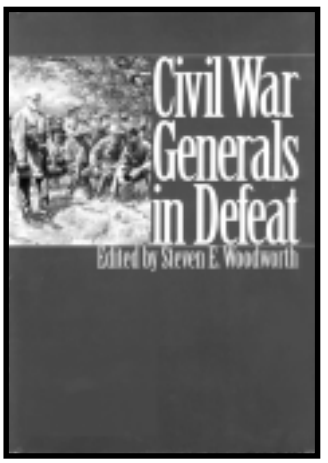
Bowden shows the face of urban warfare in women and children who voluntarily help the enemy or are forcibly used by cowards as living shields. Ground combat veterans who served in Vietnam, Korea and World War II know that enemy combatants will use noncombatants and the decency of the average US soldier to their advantage.

Unfortunately, the raw human courage on both sides was tainted by early breakdowns in soldier discipline: "No one had told him that Delta had moved to that space, but, then again, it was a cardinal sin to shoot before identifying a target.... He heard a sergeant major from the 10th Mountain Division telling his men before they left, 'This is for real. You shoot at anything,' and clearly these guys had taken him seriously."

Bowden critiques operational-level decisions in Mogadishu including excessive information on the battlefield, well-intentioned but often inappropriate rules of engagement and simplistically choosing sides in complex civil strife. One key operational lesson for the future is that low-tech mass can effectively counter US high technology in certain conditions—RPGs took down two Black Hawks and totally disabled two others. One key national strategic lesson for the future is knowing the differences between vital national interests essential to our national survival, security or well-being; compelling or important national interests; worthy endeavors that are not essential national interests; and employing military power accordingly.

*Black Hawk Down* is a story of modern war. Bowden tells it well and accurately and provides 24 pages of documentation and commentary. His account is dramatic, thoughtful and insightful.

**LTC Kenneth H. Pritchard,**
***USAR, Retired, Lusby, Maryland***




**CIVIL WAR GENERALS IN DEFEAT** edited by Steven E. Woodworth, University Press of Kansas, Lawrence, KS, 1999, 238 pages, $29.95.

In the seven essays in *Civil War Generals in Defeat*, Steven E. Woodworth focuses on why prominent Civil War generals were not victorious. He examines such well-known and controversial Civil War figures as Confederate Generals Robert E. Lee, Albert Sidney Johnston, George B. McClellan, Don Carlos Buell, Braxton Bragg, John C. Pemberton and Joseph Hooker. Each essay provides numerous conclusions serving to discount revisionist historical findings and to add to each general's true character.

Woodworth bucks the historical trend of focusing on victors. Each essay discusses the losing general's leadership style, its relevance to subordinate leaders and its integration into the military background of each general's command. The essays not only explore the lost battle but the effects the loss had within the Civil War. Aside from the controversial findings, the contributors superbly display the ironies of warfare and the military structure itself that helped lead to each general's eventual defeat or ruin. Unfortunately, no maps or diagrams support the many references to details about campaigns and individual battles.

Woodworth has a strong historical background, making him a credible editor of such a compilation. He twice won the Fletcher Pratt Award for his books *Davis and Lee at War* (University Press of Kansas, Lawrence, 1995, $29.95) and *Jefferson Davis and His Generals* (University Press of Kansas, 1992, $14.95).

**MAJ Frank Zachar, USA**
***School of Advanced MilitaryStudies,***
***Fort Leavenworth, Kansas***

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**THE ALAMO: An illustrated History** by Edwin P. Hoyt, Taylor Publishing Company, Dallas, TX, 1999, 208 pages, $28.95.

It was a small and unimportant battle—a military blunder. It decided nothing. Yet, it decided everything. When the last shot was fired on 6 March 1836, all 183 defenders of the fortified Spanish mission—the Alamo—at San Antonio de Bexar lay dead. The victor, Mexican General Antonio de Lopez de Santa Anna, had crushed one more rebellious obstacle to his absolute rule.

"Remember the Alamo!" became a rallying cry, a call to arms and eventually, a battle cry for hundreds of Texans (persons born in Texas), Texians (Texas colonists), Tejanos (persons born in Mexico who lived in Texas) and Americans who wanted to avenge the deaths of the Alamo's heroic defenders. In the end, at the Battle of San Jacinto, Santa Anna lost the war, and the Republic of Texas became an independent nation.

Edwin P. Hoyt describes how and why the crumbling, indefensible mission came to be defended rather than destroyed and abandoned as ordained. Within days of arriving at the mission and seeing that some improvements had been made, Colonel James Bowie decided it could be defended. His decision contradicted General Sam Houston's Fabian strategy of harrying the much larger and better equipped Mexican Army while avoiding pitched battles or being "shut up in forts" and wiped out. The Mexican Army was modeled on

Napoleonic lines and fought best in open terrain. Houston's army could not equal the Mexican cavalry, which could "sweep through level ground like a scythe." Houston wanted to weaken the Mexican Army by drawing it further from its supply bases.

In this concise yet comprehensive history, Hoyt is at his best when describing battle scenes. He graphically describes the brutal fighting and "legendary defense of the mission by a small band of larger-than-life heroes." Hoyt is an expert historian and accomplished journalist; his writing is clear and direct, and his analysis is always insightful, sometimes startling.

Twenty-five biographical sidebars complement the main text. The book also includes over 120 black-and-white and color period illustrations of the people, places, battles, dates, weapons, maps, terminology and personal accounts from letters and diaries. This background gives the reader a candid, often controversial but illuminating, perspective of events even though the text and illustrations are highly partisan and patriotic, reflecting the Texas viewpoint.

**MAJ Glenn E. Gutting,**
***Louisiana Army National Guard,***
***New Orleans, Louisiana***

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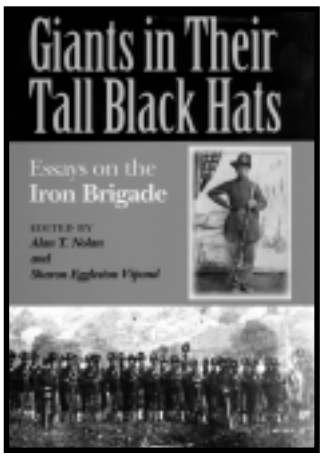
**GIANTS IN THEIR TALL BLACK HATS: Essays on the Iron Brigade,** edited by Alan T. Nolan and Sharon Eggleston Vipond, University of Indiana Press, Bloomington, IN, 1998, 320 pages, $27.95.

No regiment in the Union Army compiled a more distinguished record than did the "Black Hat Brigade," the only all-Western brigade in the Army of the Potomac. Composed of Wisconsin and Indiana volunteers, the Iron Brigade was arguably the best combat brigade in the Union Army until decimated at Gettysburg. According to one historian who analyzed Civil War casualty rates, in proportion to its numbers the brigade "sustained the heaviest loss of any in the war."

Editors Alan Nolan and Sharon Eggleston Vipond's insightful es-




says provide fresh perspectives on the Iron Brigade's exploits, detailing military and political events in the words of actual combatants. John Gibbon, a Regular Army officer, epitomized the Iron Brigade. He instilled pride and discipline in the ranks and gave the brigade its distinctive feature—the black Hardee hat of the regulars—that became the brigade's badge of honor. Unfortunately, none of Gibbon's successors, brave men all, matched the fiery West Pointer in the rank and file's admiration and affection. By the time he left to assume division command, he had fashioned a superb fighting force that stood "like iron" on several battlefields.

Gibbon's immediate successor, John F. Reynolds, commanded the respect of his soldiers, but he never developed Gibbon's knack for handling volunteers. Only after the horrific Gettysburg battle did his name appear in soldiers' letters and diaries. To the survivors, Gettysburg became "the grand epic of the American Civil War and the 'gallant Reynolds' the symbolic fallen knight of the Union."

**COL Cole C. Kingseed, *USA,***
***West Point, New York***

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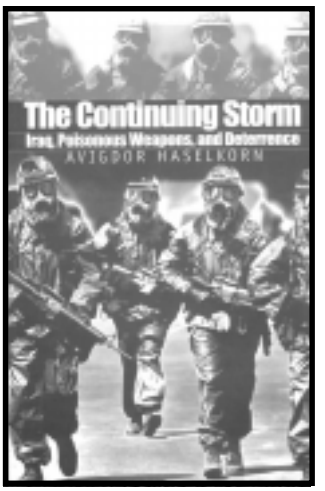
**THE CONTINUING STORM: Iraq, Poisonous Weapons, and Deterrence** by Avigdor Haselkorn, Yale University Press, New Haven, CT, 1999, 398 pages, $30.00.

In *The Continuing Storm: Iraq, Poisonous Weapons, and Deterrence*, Avigdor Haselkorn says that Iraqi weapons of mass destruction, specifically chemical and biological (CB) weapons, played a significant, if not determining, role in President George Bush's decision to "prematurely" end the Gulf War. Haselkorn argues that this political decision—in the strategic sense—while seemingly unilateral in nature, was actually a product of Saddam Hussein's strategy of "terrorist deterrence"—the adoption of extremist means designed to convey to an enemy a de-




termination to go to any length to win a battle. Though Haselkorn's thesis concerns ending the Gulf War, his critical analysis questions US strategic policy, planning and decision making from the conflict's outset. This critical analysis, with resultant conclusions and implications for future US strategy, makes this book important and thought-provoking.

Haselkorn examines the Iraqi CB threat in detail and speculates on Saddam's strategic calculations concerning their employment. His analysis of Hussein's strategy of terrorist deterrence is compelling. He contends that Iraq's 25 February 1991 launch of an *al-Hijarah* SCUD missile armed with a concrete warhead, aimed at the Dimona nuclear reactor in Israel was a signal of Saddam's ability and intent to employ CB weapons as well as a continued attempt to draw Israel into the war. He

also suggests that the relative success of the US campaign, coupled with the uncertainty of the CB threat and the corresponding Israeli reaction, were compelling factors in Bush's decision to end the war.

With the specter of Iraqi CB weapons prominently in the minds of US leaders, how was Bush able to reach his decision to go to war? Haselkorn contends that the decision was apparently based on four assumptions: that US warnings would be effective in deterring Saddam from using CB weapons; that Bush could trust US intelligence capabilities for an accurate assessment of the CB threat; that he could rely on the air campaign to neutralize the Iraqi threat of mass destruction attacks and SSMs; and that if Iraq used CB weapons against US troops, casualties would be minimal. Had Bush had an accurate assessment of these assumptions and the risks involved, it is questionable whether he would have made the decision to attack.

While masterfully documented, Haselkorn's analysis relies heavily on inference, deduction and conjecture. As more information becomes available, some of these conclusions may be challenged because they inherently color the work as a historical account. However, the strategist works in the world of imperfect information, and as such, the work is a compelling analysis and commentary on US strategic planning.

**MAJ Chris P. Gehler, *USA,***
***Fort Leavenworth, Kansas***

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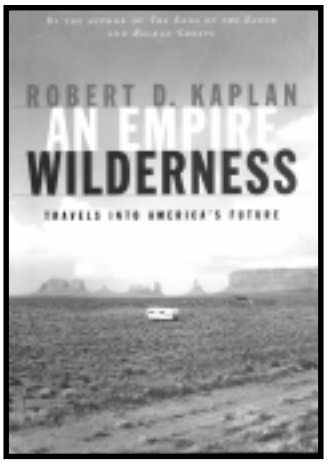
**AN EMPIRE WILDERNESS** by Robert D. Kaplan, Random House, New York, NY, 1998, 196 pages, $27.50.

Robert Kaplan has visited more than 70 countries in his lifetime. Gifted with a keen eye for detail and macroscopic vision, he builds a coherent model of the world and the dynamics shaping its future from myriad data points of individual observations. His books are part travelogue and part prophecy.

In previous works, he chronicles his journeys through western




Africa's economic and environmental devastation, the Middle East's fundamentalists hotbeds and the Balkans' culture wars. Extrapolating the future, he paints a bleak picture of coming anarchy in his best-selling books *Balkan Ghosts: A Journey Through History* (Vintage Books, New York, 1994, $13.00) and *The Ends of the Earth: From Togo to Turkmenistan, from Iran to Cambodia, a Journey to the Frontiers of Anarchy* (Vintage Books, New York, 1997, $15.00). This time, Kaplan relates a somewhat more benign odyssey through the modern American frontier. Beginning in almost the geographic center of the contiguous United States—the unassuming city of Leavenworth, Kansas—he travels westward from the Mississippi River parallel to the route of the historic Oregon and Santa Fe trails.

His opposing epigraphs regarding the Roman Empire at the beginning of the book introduce a dichotomy that is the essence of his thesis: North America has not escaped the turbulent forces reshaping the rest of the world and must either adapt or be consumed by them. He sees three primary forces at work: globalism, the rise of cultural identity over nationalism and the ascendance of economic interests. Cities, even in middle America, have become more internationally populated and more globally connected, reducing the federal government's hegemony.

Those who can keep up with rapidly changing technology and niche economies will prosper, while mass-production industries and blue-collar workers linked to them will be overrun by Asian and Latin American labor. People will migrate back into the cities as they recognize the benefits of population density and instant access, while suburbia will languish. The national geography, much like the American southwest, will be characterized by prosperous island cities surrounded by an "empire wilderness." America will ultimately divide into a caste culture with gradations from the rich—aware and empowered—to the poor—ignorant and disenfranchised.

North America's future—prosperity or apocalypse—depends on which of the two ends of the cultural spectrum predominates. Kaplan's supporting arguments are convincing for both possible outcomes. The

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# CGSC Notes *continued from back cover*

Terrorism presentation in Lawrence, Kansas, on 17 April, for an audience of national and international chiefs of police and FBI representatives. The topic will address military liaison capabilities.

On 2 March, LTC Carl E. Fischer conducted a class on the military operations other than war (MOOTW) analysis model for the 22d Air Mobility Wing, McConnell Air Force Base, Wichita, Kansas. The class introduced a deductive model that can be used to better prepare a unit for deployment. The Wing requested the class upon its designation as Lead Mobility Wing for the Air Force for Humanitarian Operations.

POC is Major Bob Finn, Operations, (913) 684-2536.

problem with his thesis, however, is that he argues both sides at the same time. This book departs from others in the futurist genre in that it fails to make a firm prediction. It is valuable for its fresh perspectives and thought-provoking ideas but leaves prophecy of the future to the reader.

**LCDR Todd A. Kiefer, *USN,***
***Oak Harbor, Washington***

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**FIGHTING FOR THE FUTURE: Will America Triumph?** by Ralph Peters, Stackpole Books, Mechanicsburg, PA, 1999, 224 pages, $19.95.

In *Fighting for the Future: Will America Triumph?* controversial military strategist Ralph Peters claims that US political and military leaders are ignoring the nation's most probable threats and are unprepared for the brutal realities of future conflict. He asks, "Shall we dominate the earth for the good of humankind? Or will we risk the enslavement of our country and our civilization?" He argues that only a strong, fundamentally reformed national defense will prepare the US mentally or materially for the coming decades' violence.

Peters advocates that the military stop its current expensive upgrades to existing weapon systems and focus on meeting the requirements of emerging threats, including the emergence of a new warrior class of warlords, terrorists, international criminals and the militaries of failing states undeterred by US technological superiority. He claims the future battlefield will be the bloody street-to-street warfare for which the US is ill-prepared.

Preaching his message with the self-confidence of an evangelist, Peters provides a compelling, fascinating and insightful vision. His views are confrontational but breathtakingly relevant in their cold realism. While his US-centric focus is unashamedly tinged with cultural elitism, he challenges the popular ethic and provides a fresh perspective on future warfare.

Peters, a retired military officer, has extensive experience in the world's troubled regions, which gives his work authenticity. He is a frequent commentator on military and strategic issues in *The Wall Street Journal*, *The Washington Post*, *Newsweek*, *Army Times* and *The Los Angeles Times*. He is also the best-selling author of eight novels.

**MAJ Gregory P. Walters, *USA,***
***Victoria Barracks, Australia***